

Technical Manual

SCAG'S COMMERCIAL MOWER

MODELS

ST 12B	Tractor
ST 13K	Tractor
ST 17KA	Tractor
ST 18B	Tractor
ST 18KH	Tractor
SLM 40T	Cutter Deck
SLM 48T	Cutter Deck
SM 48	Cutter Deck
SM 61	Cutter Deck

**Scag Power Equipment, Inc.
W226 N900 Eastmound Drive
Waukesha, Wisconsin 53186**

**Part No. 01001
Printed in USA 12-86**

WARNING

If incorrectly used, this machine can cause severe injury. Those who use and maintain the machine should be trained in its proper use, warned of its dangers, and should read entire manual before attempting to set up, operate, adjust or service the machine.

LIMITED WARRANTY-COMMERCIAL EQUIPMENT

This warranty extends to the original retail purchaser only and commences on the date of original retail purchase.

Any part of the Scag commercial mower manufactured by Scag and found in the reasonable judgment of Scag to be defective in material or workmanship, will be repaired or replaced by an authorized service dealer without charge for parts and labor.

The Scag mower including any defective part must be returned to an authorized Scag service dealer within the warranty period. The expense of delivering the mower to the dealer for warranty work and the expense of returning it back to the owner after repair or replacement will be paid for by the owner. Scag's responsibility in respect to claims is limited to making the required repairs or replacements, and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any Scag mower. Proof of purchase will be required by the dealer to substantiate any warranty claim. All warranty work must be performed by an authorized Scag service dealer.

This warranty is limited to one year from the date of original retail purchase for any Scag mower that is used for commercial purposes, or any other income-producing purpose (90 days for rental use).

This warranty does not cover any mower that has been subject to misuse, neglect, negligence, or accident, or that has been operated in any way contrary to the operating instructions as specified in the Technical Manual. The warranty does not apply to any damage to the mower that is the result of improper maintenance, or to any mower or parts that have not been assembled or installed as specified in the Technical Manual. The warranty does not cover any mower that has been altered or modified so as to adversely affect the product's operation, performance or durability or that has been altered or modified so as to change the intended use of the product. In addition, the warranty does not extend to repairs made necessary by normal

wear, or by the use of parts or accessories which, in the reasonable judgment of Scag, are either incompatible with the Scag mower or adversely affect its operation, performance or durability. This warranty does not cover engines, electric starters, batteries, belts and tires which are warranted separately by their manufacturer and for a different period of time.

Scag Power Equipment reserves the right to change or improve the design of any mower without assuming any obligation to modify any mower previously manufactured.

All other implied warranties are limited in duration to the one (1) year warranty period or ninety (90) days for mowers used for rental purpose. Accordingly, any such implied warranties including merchantability, fitness for a particular purpose, or otherwise, are disclaimed in their entirety after the expiration of the appropriate one-year or ninety day warranty period. Scag's obligation under this warranty is strictly and exclusively limited to the repair or replacement of defective parts and Scag does not assume or authorize anyone to assume for them any other obligation. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Scag assumes no responsibility for incidental, consequential or other damages including, but not limited to, expense for gasoline, expense of delivering the mower to an authorized service dealer and expense of returning it back to the owner, mechanic's travel time, telephone or telegram charges, rental of a like product during the time warranty repairs are being performed, travel, loss or damage to personal property, loss of revenue, loss of use of the mower, loss of time or inconvenience. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

*Your mower was built to the highest standards in the industry. However, **your mower is only as safe as the operator.** Carelessness or error on the part of the operator may result in serious bodily injury. Hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of the personnel involved in the operation, transport, maintenance, and storage of the equipment. Make sure every operator is properly trained and thoroughly familiar with all of the controls before operating the equipment.*

IMPORTANT

Safe Operation Practices for Riding Vehicles

1. Know the controls and how to stop quickly. **READ THIS TECHNICAL MANUAL** and instructions furnished with attachments.

2. Do not allow children to operate the machine. Do not allow adults to operate it without proper instruction.

3. Do not carry passengers. Do not mow when children and others are around.

4. Clear the work area of objects (wires, rocks, etc.) that might be picked up and thrown.

5. Disengage all attachment clutches and shift into neutral before attempting to start the engine.

6. Disengage power to attachments and stop the engine before leaving the operator's position.

7. Disengage power to attachments and stop the engine before making any repairs or adjustments.

8. Disengage power to attachments when transporting or not in use.

9. Take all possible precautions when leaving the vehicle unattended, such as disengaging the power-take-off, lowering the attachments, setting the parking brake, stopping the engine, and removing the key.

10. Do not stop or start suddenly when going uphill or downhill. Mow up and down the face of steep slopes; never across the face.

11. Reduce speed and exercise extreme caution on slopes and in sharp turns to prevent tipping or loss of control. Be especially cautious when changing direction on slopes.

12. Stay alert for holes, rocks, and roots in the terrain and other hidden hazards. Keep away from drop-offs.

13. Use care when pulling loads or using heavy equipment.

- a. Use only approved drawbar hitch points.
- b. Limit loads to those you can safely control.
- c. Do not turn sharply. Use care when backing.
- d. Use counterweights or wheel weights when suggested in this technical manual.

14. Watch out for traffic when crossing or near roadways.

15. When using any attachments, never direct discharge of material toward bystanders nor allow anyone near the vehicle while in operation.

16. Handle gasoline with care — it is highly flammable.

- a. Use approved gasoline container.
- b. Never remove the fuel cap of, or add gasoline to, a running or hot engine or an engine that has not been allowed to cool for several minutes after running. Never fill the tank indoors and always clean up spilled gasoline.
- c. Open doors if the engine is run in the garage — exhaust fumes are dangerous. Do not run the engine indoors.

17. Keep the vehicle and attachments in good operating condition, and keep safety devices and shields in place and in working condition.

18. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.

19. Never store the equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.

20. To reduce fire hazard, keep the engine free of grass, leaves, or excessive grease.

21. The vehicle and attachments should be stopped and inspected for damage after striking a foreign object, and the damage should be repaired before restarting and operating the equipment.

22. Do not change the engine governor settings or overspeed the engine.

23. When using the vehicle with mower, proceed as follows:

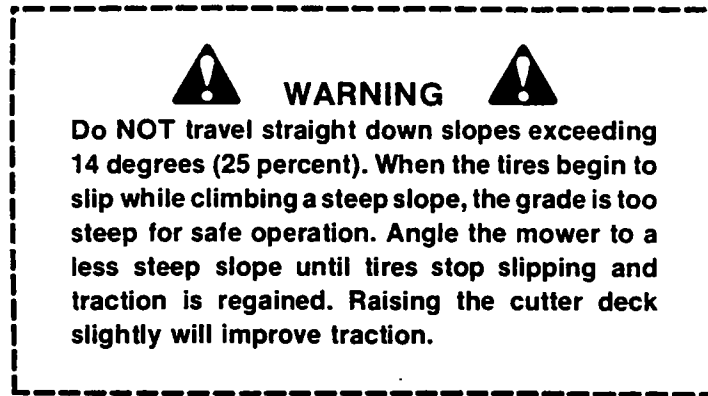
- a. Mow only in daylight or in good artificial light.
- b. Never make a cutting height adjustment while the engine is running if the operator must dismount to do so.

- c. Shut the engine off when removing the grass catcher or unclogging chute.
- d. Check the blade mounting bolts for proper tightness at frequent intervals.

24. Under normal usage, the grass catcher bag material is subject to deterioration and wear. Check bag frequently for deterioration and wear and replace

worn bags. Check that replacement bags comply with the original manufacturer's recommendations or specifications.

25. Disengage power to mower before backing up. Do not mow in reverse unless absolutely necessary and then only after observation of the entire area behind the mower.



ASSEMBLY INSTRUCTIONS

- 1.** Remove all crating and packing materials.
- 2.** Lay out loose bolts and nuts according to the "Where Used" as listed in the loose parts packing list.
- 3.** Set the cutter deck level, about two inches off the floor.
- 4.** Remove belt cover. Remove mower engage control rod.
- 5.** Move tractor assembly to cutter deck so that mounting brackets clear engine deck.
- 6.** Unwind winch lift cable and tilt engine deck to horizontal position. Align the **lower set of holes** in the mower deck brackets and insert drift pins on each side to temporarily locate holes.

IMPORTANT

- 7.** Use lower set of holes in brackets for mowing two inches and above (for **under** two inches, use upper set of holes). Insert six 7/16-14 x 1 bolts, flat washers, lock washers and nuts. Tighten all six bolts very securely. Then go back and retorque each one.
- 8.** Raise cutter deck using lift winch and assemble front caster wheels using six 5/16-18 x 3/4 bolts, lock washers and nuts.
- 9.** Install the mower engage control rod. Secure with hair pin at both ends.

- 10.** Route blade drive belt over center spindle pulley. Be sure belt clears the belt guide saddle at center spindle and is positioned between the pulley and its belt guide at the center pulley support bracket.
 - 11.** Push mower engage lever forward until it snaps to rest. Adjust belt tension as specified in adjustment sections. **Do Not Adjust Too Tight!**
 - 12.** Install grass discharge deflector chute using two 5/16-18 x 1 bolts and elastic stop lock nuts.
 - 13.** Place seat assembly on rider support channel using 2nd and 3rd hole aft from steering handle. Install two 7/16-14 x 1-1/4 bolts and lock washers. Stand back and sight straight ahead. Align seat spring parallel with frame. Tighten bolts securely.
 - 14.** Adjust arm rests to horizontal position (if necessary) by turning setscrew in rear of each arm.
 - 15.** Insert steering handle on shaft and secure with one 5/16-18 x 1-1/2 bolt, 2 washers and locknut. Tighten securely.
 - 16.** Reduce tire pressure to values specified in adjustments section.
- NOTE:** Tires are over inflated for shipping purposes.
- 17.** Remove battery and fill each cell with 1.265 specific gravity, battery grade electrolyte to level

indicator. **Do Not Fill** more than 3/16" above plates. Allow battery to set for 20 minutes. Refill to level. Battery may be placed on charge at 3 amperes for maximum capacity (not usually necessary).

18. CAUTION: Reinstall battery. **Connect positive lead first.**

CAUTION: Note that battery contains sulfuric acid which is poison and causes severe burns. Avoid contact with skin, eyes or clothing. Flush spills with water.

19. Check engine crankcase. It was filled at the factory, but may need additional oil for proper level.

20. Fill fuel tank.

21. Open shut-off under tank.

22. After initial run and inspection of cutter belt, replace belt cover.

ADJUSTMENTS

1. Check that all belts clear their belt guides by about 1/8 to 3/16 inch. Adjust guides if necessary.

2. Adjust blade drive belt by turning turnbuckle so that about 10 lb. pull sideways deflects belt 1/2 inch. **Do Not Overtighten!** Only a moderate force should be used on control lever.

3. Adjust cutter deck belt by turning lock nut on "J" pull rod where applicable. About 10 lbs. pull sideways deflects belt 1/2 inch. Test belt at short section between center spindle and left hand spindle (do not test long section at rear of deck).

IMPORTANT

Readjust new belt tensions after 4 hours of operation and again after about 24 hours to take up initial stretch.

4. Transaxle shifter neutral may require adjustment so that starter engages at neutral stop. Rotate swivel joint if necessary to lengthen or shorten the shift rod.

5. Set parking brake before starting engine.

6. Please Remember: To start engine, three safety switches must be activated:

- The shift lever must be in neutral.
- The mower engage lever must be pulled all the way back (and held there).
- The left foot safety switch pedal must be depressed.

7. Run new engine at half speed about 5 minutes before applying any load.

8. Adjust fuel-air mixture valves according to specifications in engine manual.

9. To release parking brake, depress right hand foot pedal, lift brake lever and rotate 90 degrees.

10. Readjust neutral, if necessary.

FOOT PEDAL

11. Place a 2x4 board on edge between the pedal and foot rest plate (approximately 4 inches). Adjust foot pedal control by adjusting the two cable mounting nuts located on each end of the sheath. The pedal should be about 4-1/4 inches above foot rest plate when correctly adjusted.

BRAKE ADJUSTMENT

12. Always make sure foot pedal is adjusted correctly before adjusting the brake. Brake must be adjusted in following sequence: With transaxle belt engaged (foot pedal in up position) move brake cable pulley fore or aft in its slot to permit transaxle brake lever to rest against its stop. Then adjust brake lever nuts to permit free movement of lever about 1/8 inch from stop by pushing lever with hand. (Disc must not "drag" on brake pads when adjusted.) Lock jam nut securely. If brake lever is too tight, shifting may be impossible and brake wear will be excessive.

TIRE PRESSURES

13. Recommended pressures:

Caster Wheels	25 PSI
Rear Steering Wheel	25 PSI
Drive Wheels	15 PSI

OPERATING INSTRUCTIONS

1. Read and understand the section on safety suggestions before any attempt to operate.

IMPORTANT

2. To provide for mower deck flotation, always turn winch handle two additional turns counterclockwise to allow cable slack after cutter deck is lowered. To raise deck turn winch handle clockwise.

3. To avoid cable damage, always transport with cutter deck down and lift cable in float position.

4. Start engine.

5. Depress foot pedal, shift out of neutral, and very gently release foot pedal. **Never shift without depressing foot pedal to declutch transaxle.**

6. To stop, depress foot pedal to disengage transaxle and to apply brake.

7. While making turns, depress foot pedal slightly to make gentle, smooth turns.

8. Engage cutter deck belt by pushing mower engage lever forward until it snaps to rest.



WARNING



To avoid serious bodily injury never run cutter blades with cutter deck in raised position.

ROUTINE MAINTENANCE SERVICE

EVERY DAY

1. Check engine oil. Do not fill above dipstick marks.

2. Clean engine blower screen (more frequently in dirty, dusty conditions).

3. Clean debris under belt cover.

4. Sharpen cutter blades.

5. Lubricate as required.

EVERY WEEK

1. Change engine oil. Use oil recommended in engine manual.

2. Check battery acid level. Add distilled water if necessary, but do not fill over 3/16 inch above plates. Excess acid will overflow while running and damage painted surfaces.

3. Clean carburetor filter.

4. Check tire pressures.

EVERY MONTH

1. Grease all fittings, brake lever and winch.

2. Clean and gap spark plugs.

3. Adjust brake lever.

LUBRICATION

Every day (or up to once a week depending upon environment) lubricate:

Cutter blade spindle bearings.

Every 100 hours of operation lubricate the following parts and wipe off all excessive grease:

Caster wheel bearing

Caster wheel pivot shafts

Idler pulley pivots.

Every 200 hours of operation lubricate all grease fittings. Periodically apply LPS to moving parts at the cutter deck idler pulley cam links.

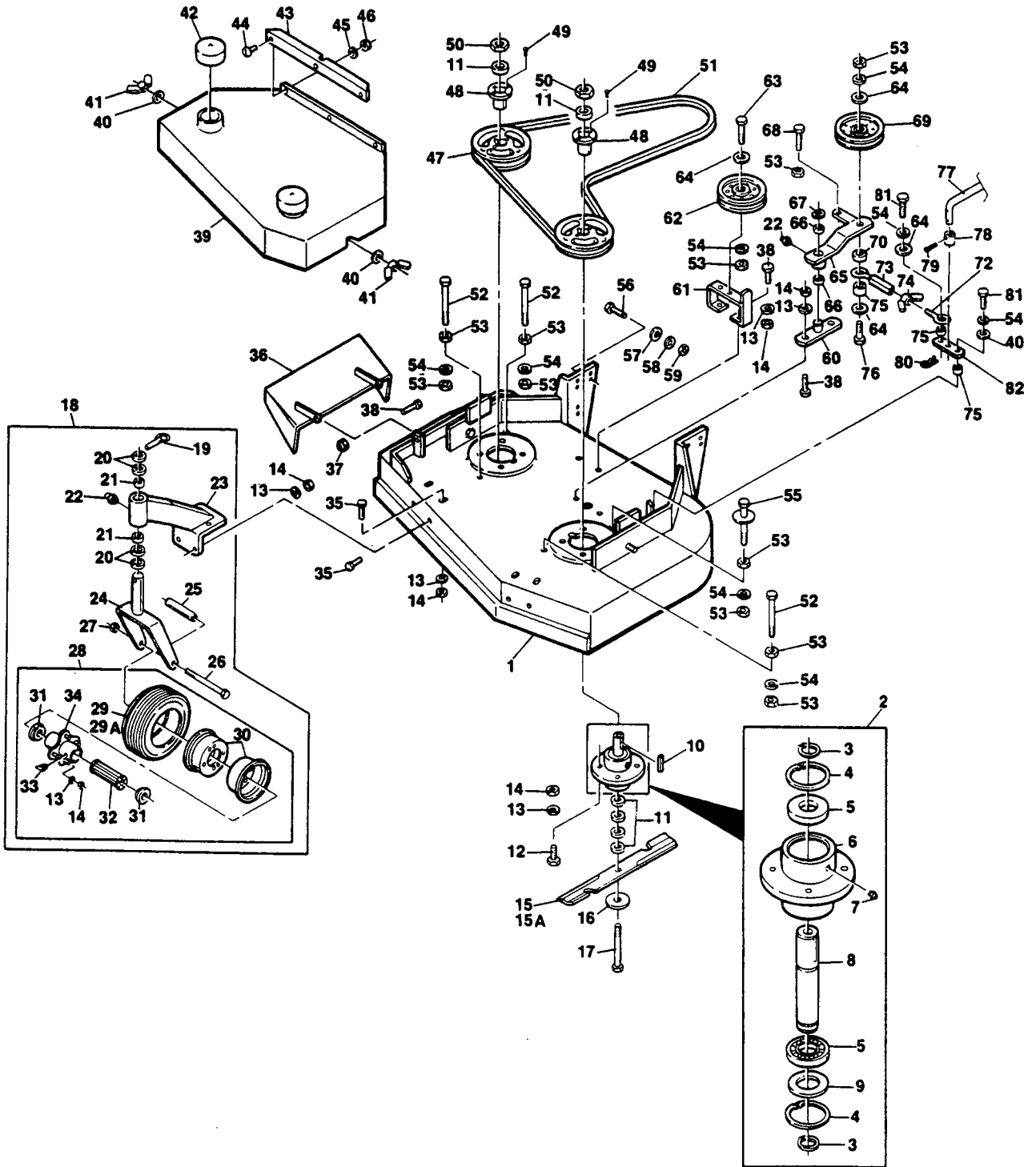
Grease gears, shaft and handle thread on winch. **Do not** oil brake mechanism on winch.

Apply grease between transaxle brake lever and brake pins.

Every 100 hours of operation remove drive wheel assemblies and apply anti-seize compound to wheel axles.

Location of grease fittings	Number
Caster wheels	2
Caster wheel pivot shaft	2
Spindle bearings	2 or 3
Idler pulley pivots	2 or 3
Rider frame pivots	2
Controls bellcrank	2
Left hand axle bearing	1
Steering handle	1
Foot pedal	1
Rear wheel vertical pivot	1
Rear wheel bearings	1
Total Number	19

SLM 40T CUTTER DECK



SLM 40T CUTTER DECK

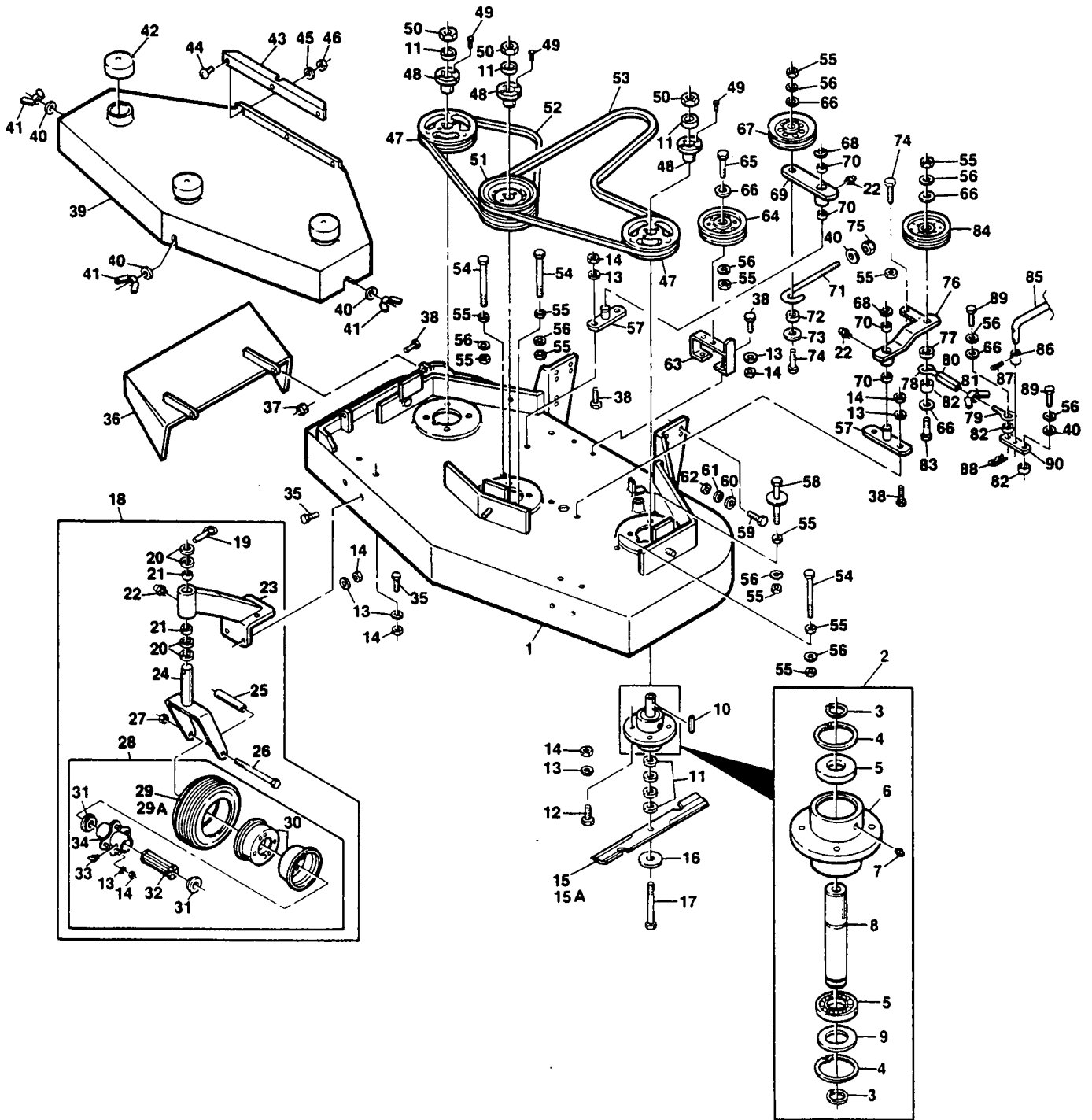
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	46146	Cutter Deck Wld. (Incl. Decal)	42	48098	Spindle Shield
2	46020	Cutter Spindle Assy. (Incl. 3-9)	43	42184	Belt Cover Skirt
3	04050-04	Retaining Ring, 1" Ext.-Inverted	44	"	Sit. Truss Hd. Mach. Screw 1/4-20 x 1/2
4	04050-07	Retaining Ring, 2-7/16 Int.-Basic	45	"	Lockwasher, Spring 1/4
5	48101	Bearing, Cutter Spindle	46	"	Hex Nut, 1/4-20
6	41001	Spindle Housing	47	48127	Pulley (Incl. 48-49)
7	48114-02	Grease Fitting, Str. 5/16 Serr.	48	48141	Taper Hub
8	43001-02	Spindle, Cutter Blade	49	"	Hex Head Bolt, 1/4-20 x 3/4
9	04041-02	Washer, 1-15/16 x 2-13/32 x 16 Ga.	50	"	Hex Nut, 5/8-11
10	04063-08	Key, 1/4 x 1/4 x 2	51	48086	Belt, Blade Drive
11	43038	Spacer, Cutter Blade	52	"	Hex Head Bolt, 3/8-16 x 5
12	"	Hex Head Bolt, 5/16-18 x 1-1/4	53	"	Hex Nut, 3/8-16
13	"	Lockwasher, Spring, 5/16	54	"	Lockwasher, Spring, 3/8
14	"	Hex Nut, 5/16-18	55	45098	Belt Guide Wld.
15	48109	Cutter Blade, 20" Std.	56	"	Hex Head Bolt, 7/16-14 x 1
15A	48183	Cutter Blade, 20" High Lift	57	"	Washer, 15/32 x 59/64 x 16 Ga.
16	04040-10	Flat Washer, 5/8W	58	"	Lockwasher, Spring, 7/16
17	04001-41	Hex Head Bolt, 5/8-11 x 9-1/2	59	"	Hex Nut, 7/16-14, Elastic Stop
18	46079	Caster Assy. (Incl. 19-28)	60	45037	Idler Pivot Wld.
19	04066-01	Quick Pin	61	45012	Idler Pulley Support
20	43037-01	Spacer, Caster Yoke, 1/2 Long	62	48068	Pulley, Belt Guide
21	48100-01	Bronze Bearing	63	"	Hex Hd Bolt, 3/8-16 x 1-3/4
22	48114-01	Grease Fitting, Str. 1/4-28	64	"	Washer, 13/32 x 13/16 x 16 Ga.
23	46082	Support Assy. (Incl. 21-22)	†65	46080	Idler Arm Assy. (Incl. 22 & 66)
24	45006	Caster Yoke Wld.	†65	46145	Idler Arm Assy. (Incl. 22 & 66)
25	43022	Sleeve, Caster Wheel Bearing	66	48100-05	Bronze Bearing
26	04001-37	Hex Head Bolt, 1/2-13 x 5-1/2	67	04050-02	Retaining Ring, 3/4 Ext.-"E"
27	"	Hex Locknut, 1/2-13	68	"	Hex Head Bolt, 3/8-16 x 2-1/4
28	48006-01	Wheel Assy. (Incl. 13-14, 29-34)	†69	48150	Idler Pulley, Belt Clutch - Std.
29	48006-02	Tire Only, Caster Wheel	†69	48269	Idler Pulley, Belt Clutch - Wide
29A	48006-03	Inner Tube Only, Caster Wheel	70	43063	Spacer, Idler
30	48006-04	Rim Pair, Caster Wheel	71	04070-02	Eyebolt, LH
31	48006-07	Retainer, Bearing, Caster Wheel	72	04070-01	Eyebolt, RH
32	48006-06	Roller Bearing, Caster Wheel	73	43025	Turnbuckle
33	48114-03	Grease Fitting, 45° 1/4-28	74	04022-02	Wing Nut, 5/16-18
34	48006-05	Hub Assy. w/Bolts, Caster Wheel	75	43042	Sleeve, Cam Clutch
35	"	Hex Head Bolt, 5/16-18 x 3/4	†76	"	Hex Head Bolt, 3/8-16 x 2-3/4
36	45029	Discharge Chute Wld.	77	43067	Blade Clutch Rod
37	"	Hex Nut, 5/16-18 Elastic Stop	78	43043	Sleeve, Clutch Rod
38	"	Hex Head Bolt, 5/16-18 x 1	79	"	Cotter Pin, 3/32 x 1
39	46147	Belt Cover Assy. (Incl. Decals)	80	04062-01	Hair Pin, Large
40	"	Washer, 25/64 x 15/16 x 12 Ga.	81	"	Hex Head Bolt, 3/8-16 x 1
41	04022-04	Wing Nut, 3/8-16	82	45084	Cam Link Wld.

* Common hardware which should be purchased locally. All bolts Grade 5 plated, all other fasteners zinc plate.

† 48150 Std. Idler requires 46080 Idler Arm Assembly and 2-1/2" long Idler Mounting Bolt.

48269 Wide Idler requires 46145 Idler Arm Assembly and 2-3/4" long Idler Mounting Bolt.

SLM 48T CUTTER DECK

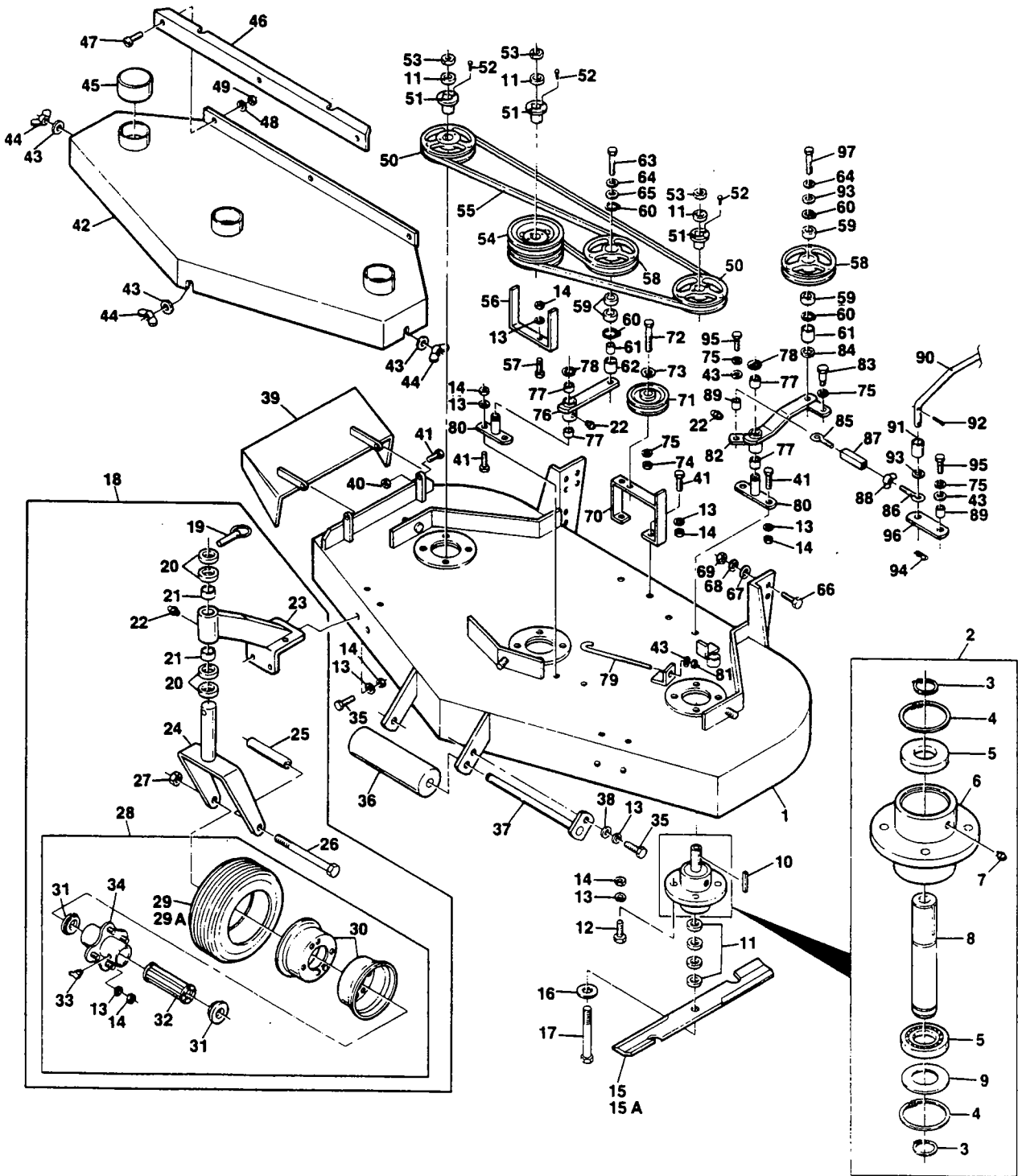


SLM 48T CUTTER DECK

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	46152	Cutter Deck Wld. (Incl. Decal)	46	*	Hex Nut, 1/4-20
2	46020	Cutter Spindle Assy. (Incl. 3-9)	47	48127	Pulley (Incl. 48-49)
3	04050-04	Retaining Ring, 1" Ext.-Inverted	48	48141	Taper Hub
4	04050-07	Retaining Ring, 2-7/16 Int.-Basic	49	*	Hex Head Bolt, 1/4-20 x 3/4
5	48101	Bearing, Cutter Spindle	50	*	Hex Nut, 5/8-11
6	41001	Spindle Housing	51	48129	Pulley, Double (Incl. 48-49)
7	48114-02	Grease Fitting, Str. 5/16 Serr.	52	48087	Belt, RH Blade Drive
8	43001-02	Spindle, Cutter Blade	53	48088	Belt, Blade Drive
9	04041-02	Washer, 1-15/16 x 2-13/32 x 16 Ga.	54	*	Hex Head Bolt, 3/8-16 x 5
10	04063-08	Key, 1/4 x 1/4 x 2	55	*	Hex Nut, 3/8-16
11	43038	Spacer, Cutter Blade	56	*	Lockwasher, Spring, 3/8
12	*	Hex Head Bolt, 5/16-18 x 1-1/4	57	45037	Idler Pivot Wld.
13	*	Lockwasher, Spring, 5/16	58	45098	Belt Guide Wld.
14	*	Hex Nut, 5/16-18	59	*	Hex Head Bolt, 7/16-14 x 1
15	48110	Cutter Blade, 16-1/2" Std.	60	*	Washer, 15/32 x 59/64 x 16 Ga.
15A	48184	Cutter Blade, 16-1/2" High Lift	61	*	Lockwasher, Spring, 7/16
16	04040-10	Flat Washer, 5/8W	62	*	Hex Nut, 7/16-14, Elastic Stop
17	04001-41	Hex Head Bolt, 5/8-11 x 9-1/2	63	45012	Idler Pulley Support
18	46079	Caster Assy. Comp. (Incl. 19-28)	64	48068	Pulley, Belt Guide
19	04066-01	Quick Pin	65	*	Hex Hd. Bolt, 3/8-16 x 1-3/4
20	43037-01	Spacer, Caster Yoke, 1/2 Long	66	*	Washer, 13/32 x 13/16 x 16 Ga.
21	48100-01	Bronze Bearing	67	48181	Idler Pulley, "V" Groove
22	48114-01	Grease Fitting, Str, 1/4-28	68	04050-02	Retaining Ring, 3/4 Ext.-"E"
23	46082	Support Assy. (Incl. 21-22)	69	46081	Idler Arm Assy. (Incl. 22 & 70)
24	45006	Caster Yoke Wld.	70	48100-05	Bronze Bearing
25	43022	Sleeve, Caster Wheel Bearing	71	43028	Rod, Idler Pull, J
26	04001-37	Hex Head Bolt, 1/2-13 x 5-1/2	72	43077	Spacer, J Pull Rod
27	*	Hex Locknut, 1/2-13	73	04041-11	Washer, 3/8 x 1-1/2 x 16 Ga.
28	48006-01	Wheel Assy. (Incl. 13-14, 29-34)	74	*	Hex Head Bolt, 3/8-16 x 2-1/4
29	48006-02	Tire Only, Caster Wheel	75	*	Hex Nut, 3/8-16 Elastic Stop
29A	48006-03	Inner Tube Only, Caster Wheel	†76	46080	Idler Arm Assy. (Incl. 22 & 70)
30	48006-04	Rim Pair, Caster Wheel	†76	46145	Idler Arm Assy. (Incl. 22 & 70)
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35	*	Hex Head Bolt, 5/16-18 x 3/4	81	04022-02	Wing Nut, 5/16-18
36	45029	Discharge Chute Wld.	82	43042	Sleeve, Cam Clutch
37	*	Hex Nut, 5/16-18 Elastic Stop	†83	*	Hex Head Bolt, 3/8-16 x 2-3/4
38	*	Hex Head Bolt, 5/16-18 x 1	†84	48150	Idler Pulley, Belt Clutch - Std.
39	46149	Belt Cover Assy. (Incl. Decals)	†84	48269	Idler Pulley, Belt Clutch - Wide
40	*	Washer, 25/64 x 15/16 x 12 Ga.	85	43067	Blade Clutch Rod
41	04022-04	Wing Nut, 3/8-16	86	43043	Sleeve, Clutch Rod
42	48098	Spindle Shield	87	*	Cotter Pin, 3/32 x 1
43	42184	Belt Cover Skirt	88	04062-01	Hair Pin, Large
44	*	Slt. Truss Hd. Mach. Screw, 1/4-20 x 1/2	89	*	Hex Head Bolt, 3/8-16 x 1
45	*	Lockwasher, Spring 1/4	90	45084	Cam Link Wld.

- * Common hardware which should be purchased locally. All bolts Grade 5 plated, all other fasteners zinc plate.
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SM 48 & SM 61 CUTTER DECK

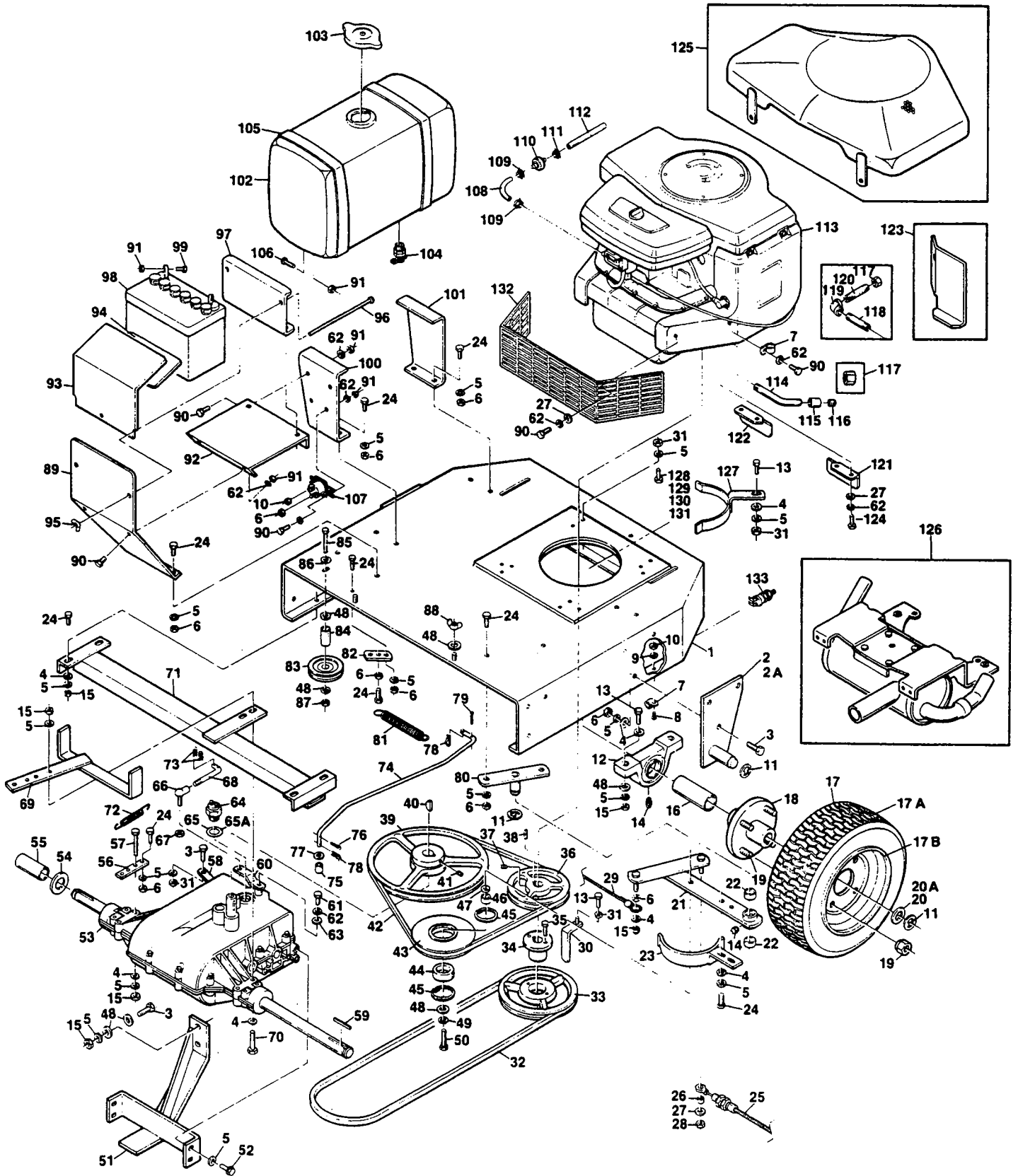


SM 48 & SM 61 CUTTER DECK

Ref. No.	Part No.	Description	SM 48T	SM 61T	Ref. No.	Part No.	Description	SM 48T	SM 61T
1	46148	Cutter Deck Wld. (Incl. Decal)	X		48	-	Lockwasher, Spring, 1/4	X	X
1	46150	Cutter Deck Wld. (Incl. Decal)		X	49	-	Hex Nut, 1/4-20	X	X
2	46020	Cutter Spindle Assy. (Incl. 3-9)	X	X	50	48127	Pulley (Incl. 51-52)	X	X
3	04050-04	Retaining Ring, 1" Ext.-Inverted	X	X	51	48141	Taper Hub	X	X
4	04050-07	Retaining Ring, 2-7/16 Int.-Basic	X	X	52	-	Hex Head Bolt, 1/4-20 x 3/4	X	X
5	48101	Bearing, Cutter Spindle	X	X	53	-	Hex Nut, 5/8-11	X	X
6	41001	Spindle Housing	X	X	54	48129	Pulley, Double (Incl. 51-52)	X	
7	48114-02	Grease Fitting, Str. 5/16 Serr.	X	X	54	48128	Pulley, Double (Incl. 51-52)		X
8	43001-02	Spindle, Cutter Blade	X	X	55	48082	Belt, Blade Drive	X	
9	04041-02	Washer, 1-15/16 x 2-13/32 x 16 Ga.	X	X	55	48084	Belt, Blade Drive		X
10	04063-08	Key, 1/4 x 1/4 x 2	X	X	56	42004	Belt Guide	X	
11	43038	Spacer, Cutter Blade	X	X	56	42063	Belt Guide		X
12	-	Hex Head Bolt, 5/16-18 x 1-1/4	X	X	57	-	Hex Hd. Bolt, 5/16-18 x 1-1/2	X	X
13	-	Lockwasher, Spring, 5/16	X	X	58	48062	Pulley, Idler	X	X
14	-	Hex Nut, 5/16-18	X	X	59	48102	Bearing	X	X
15	48111	Cutter Blade, 21" Std.		X	60	04050-06	Retaining Ring, 1-9/16 Int. Basic	X	X
15	48110	Cutter Blade, 16-1/2" Std.	X		61	43045	Sleeve	X	X
15A	48184	Cutter Blade, 16-1/2" High Lift	X		62	43040	Spacer	X	X
16	04040-10	Fiat Washer, 5/8W	X	X	63	-	Hex Hd. Bolt, 1/2-20 x 2-1/2	X	X
17	04001-41	Hex Head Bolt, 5/8-11 x 9-1/2	X	X	64	-	Lockwasher, Spring, 1/2	X	X
18	46079	Caster Assy, Comp. (Incl. 19-28)	X	X	65	-	Washer, 17/32 x 1-1/16 x 3/32	X	X
19	04066-01	Quick Pin	X	X	66	-	Hex Head Bolt, 7/16-14 x 1	X	X
20	43037-01	Spacer, Caster Yoke, 1/2 Long	X	X	67	-	Washer, 15/32 x 59/64 x 16 Ga.	X	X
21	48100-01	Bronze Bearing	X	X	68	-	Lockwasher, Spring, 7/16	X	X
22	48114-01	Grease Fitting, Str. 1/4-28	X	X	69	-	Hex Nut, 7/16-14, Elastic Stop	X	X
23	46082	Support Assy. (Incl. 21-22)	X	X	70	45012	Idler Pulley Support	X	X
24	45006	Caster Yoke Wld.	X	X	71	48068	Pulley, Belt Guide	X	X
25	43022	Sleeve, Caster Wheel Bearing	X	X	72	-	Hex Hd. Bolt, 3/8-16 x 1-3/4	X	X
26	04001-37	Hex Head Bolt, 1/2-13 x 5-1/2	X	X	73	-	Washer, 13/32 x 13/16 x 16 Ga.	X	X
27	-	Hex Locknut, 1/2-13	X	X	74	-	Hex Nut, 3/8-16	X	X
28	48006-01	Wheel Assy. (Incl. 13-14, 29-34)	X	X	75	-	Lockwasher, Spring, 3/8	X	X
29	48006-02	Tire Only, Caster Wheel	X	X	76	46154	Idler Arm Assy. (Incl. 22 & 77)	X	X
29A	48006-03	Inner Tube Only, Caster Wheel	X	X	77	48100-05	Bronze Bearing	X	X
30	48006-04	Rim Pair, Caster Wheel	X	X	78	04050-02	Retaining Ring, 3/4 Ext.-"E"	X	X
31	48006-07	Retainer, Bearing, Caster Wheel	X	X	79	43028	Rod, Idler Pull, J	X	X
32	48006-06	Roller Bearing, Caster Wheel	X	X	80	45037	Idler Pivot Wld.	X	X
33	48114-03	Grease Fitting, 45° 1/4-28	X	X	81	-	Hex Nut, 3/8-16 Elastic Stop	X	X
34	48006-05	Hub Assy. w/Bolts, Caster Wheel	X	X	82	46155	Idler Arm Assy. (Incl. 22 & 77)	X	X
35	-	Hex Head Bolt, 5/16-18 x 3/4	X	X	83	43054	Shoulder Bolt	X	X
36	48038	Guide Roller		X	84	43041	Spacer, Idler	X	X
37	45046	Roller Shaft Wld.		X	85	04070-02	Eyebolt, LH	X	X
38	-	Washer, 11/32 x 11/16 x 16 Ga.		X	86	04070-01	Eyebolt, RH	X	X
39	45029	Discharge Chute Wld.	X	X	87	43025	Turnbuckle	X	X
40	-	Hex Nut, 5/16-18, Elastic Stop	X	X	88	04022-02	Wing Nut, 5/16-18	X	X
41	-	Hex Head Bolt, 5/16-18 x 1	X	X	89	43042	Sleeve, Cam Clutch	X	X
42	46149	Belt Cover Assy. (Incl. Decals)	X		90	43031	Blade Clutch Rod	X	X
42	46151	Belt Cover Assy. (Incl. Decals)		X	91	43043	Sleeve, Clutch Rod	X	X
43	-	Washer, 25/64 x 15/16 x 12 Ga.	X	X	92	-	Cotter Pin, 3/32 x 1	X	X
44	04022-04	Wing Nut, 3/8-16	X	X	93	-	Washer, 33/64 x 1 x 16 Ga.	X	X
45	48098	Spindle Shield	X	X	94	04062-01	Hair Pin, Large	X	X
46	42045	Belt Cover Skirt	X	X	95	-	Hex Head Bolt, 3/8-16 x 1	X	X
47	-	Slotted Truss Hd. Mach. Screw, 1/4-20 x 1/2	X	X	96	42057	Cam Link	X	X
					97	04001-34	Hex Hd. Bolt 1/2-20 x 2 Special	X	X

* Common hardware which should be purchased locally. All bolts Grade 5 plated, all other fasteners zinc plate.

ENGINE DECK



ENGINE DECK

Ref. No.	Part No.	Description	ST 12B	ST 13K	ST 17KA	ST 18B	ST 18KH
1	45003	Engine Deck Wld.			X	X	X
1	45061	Engine Deck Wld.	X	X			
2	45027-01	Hitch Bracket Wld. - RH	X	X	X	X	X
2A	45027-02	Hitch Bracket Wld. - LH	X	X	X	X	X
3	.	Hex Head Bolt, 5/16-18 x 1	X	X	X	X	X
4	.	Washer, 11/32 x 11/16 x 16 Ga.	X	X	X	X	X
5	.	Lockwasher, Spring, 5/16	X	X	X	X	X
6	.	Hex Nut, 5/16-18	X	X	X	X	X
7	48030-01	Clamp	X	X	X	X	X
8	.	Phillips Washer Hd. Screw, #10-32 x 1/2	X	X	X	X	X
9	.	Lockwasher, #10 Ext. Tooth	X	X	X	X	X
10	.	Hex Nut, #10-32	X	X	X	X	X
11	04050-02	Retaining Ring, 3/4 Ext. "E"	X	X	X	X	X
12	48104	Bearing, Pillow Block	X	X	X	X	X
13	.	Hex Head Bolt, 5/16-18 x 1-1/4	X	X	X	X	X
14	48114-01	Grease Fitting, Str., 1/4-28	X	X	X	X	X
15	.	Hex Lock Nut, 5/16-18	X	X	X	X	X
16	43019-02	Spacer - LH Axle			X	X	X
16	43019-05	Spacer - LH Axle	X	X			
17	48004-01	Drive Wheel Assembly (Incl. 17A-19)	X	X	X	X	X
17A	48004-02	Tire, 16 x 6.50-8 2-Ply	X	X	X	X	X
17B	48004-04	Rim	X	X	X	X	X
18	48004-05	Hub and Flange Wld. (Incl. Bolts)	X	X	X	X	X
19	48004-06	Bolt and Nut	X	X	X	X	X
20	04041-08	Washer, 49/64 x 1-1/4 x 16 Ga.	X	X	X	X	X
20A	04042-03	Washer, 13/16 x 1-3/8 x 3/32	X	X	X	X	X
21	46144	Idler Arm Wld. (Incl. 14 & 22)	X	X	X	X	X
22	48100-05	Bronze Bearing	X	X	X	X	X
23	45014	Belt Guide Wld.	X	X	X	X	X
24	.	Hex Head Bolt, 5/16-18 x 3/4	X	X	X	X	X
25	48241	Foot Cable Assembly			X		X
25	48047	Foot Cable Assembly	X	X		X	
26	43049	Sleeve, Foot Cable	X	X	X	X	X
27	.	Washer, 9/32 x 5/8 x 16 Ga.	X	X	X	X	X
28	.	Hex Lock Nut, 1/4-20	X	X	X	X	X
29	48046	Brake Cable Assembly	X	X	X	X	X
30	45036	Belt Guide Wld.				X	
30	45063	Belt Guide Wld.	X	X			
30	42199	Belt Guide			X		X
31	.	Hex Nut, 5/16-18, Elastic Stop	X	X	X	X	X
32	48081	Belt, Blade Drive SM48				X	
32	48083	Belt, Blade Drive SM61				X	
32	48244	Belt, Blade Drive SM48			X		X
32	48207	Belt, Blade Drive SM61			X		X
32	48086	Belt, Blade Drive SLM40	X	X			
32	48088	Belt, Blade drive SLM48	X	X			
33	48168	Pulley (Incl. 34 & 35)	X	X	X	X	X
34	48141	Taper Hub	X	X	X	X	X
35	.	Hex Head Bolt, 1/4-20 x 1-3/8	X	X	X	X	X
36	48063	Pulley	X	X	X	X	X
37	.	Set Screw, Hex Socket Cup Pt., 5/16-18 x 1-1/4	X	X	X	X	X
38	04063-03	Key, 1/4 x 1/4 x 2-1/2	X	X	X	X	X
39	48064	Pulley, Transaxle	X	X	X	X	X
40	04063-07	Key, Woodruff #9	X	X	X	X	X
41	.	Setscrew Hex Socket Cup Pt., 5/16-18 x 3/8	X	X	X	X	X
42	48080	Belt, Transaxle Drive				X	
42	48085	Belt, Transaxle Drive	X	X	X		X
43	48065	Pulley, Idler	X	X	X	X	X
44	48102	Bearing	X	X	X	X	X
45	04050-06	Retaining Ring, 1-9/16 Int. Basic	X	X	X	X	X
46	43044	Sleeve	X	X	X	X	X
47	43039	Spacer	X	X	X	X	X

* Common hardware which should be purchased locally. All bolts Grade 5 plated, all other fasteners zinc plate.

ENGINE DECK (Continued)

Ref. No.	Part No.	Description	ST 12B	ST 13K	ST 17KA	ST 18B	ST 18KH
48	.	Washer, 25/64 x 15/16 x 12 Ga.	X	X	X	X	X
49	.	Lockwasher, Spring, 3/8	X	X	X	X	X
50	.	Hex Head Bolt, 3/8-16 x 1-1/2	X	X	X	X	X
51	45121	Transaxle Protector Wld.			X		X
51	45056	Transaxle Protector Wld.	X	X		X	
52	.	Hex Head Bolt, Taptite, 5/16-18 x 3/4	X	X	X	X	X
53	48003	Transaxle			X	X	X
53	48160	Transaxle	X	X			
54	04042-02	Thrust Washer	X	X	X	X	X
55	43019-01	Spacer - RH Axle			X	X	X
55	43019-06	Spacer - RH Axle	X	X			
56	42075	Spacer, Transaxle	X	X	X	X	X
57	.	Hex Head Bolt, 5/16-18 x 2-3/4	X	X	X	X	X
58	42076	Rear Brace, Transaxle	X	X		X	
59	04063-04	Key, 3/16 x 3/16 x 2-1/2	X	X	X	X	X
60	42061	Shift Lever	X	X	X	X	X
61	04001-55	Hex Head Bolt, 1/4-28 x 3/4 Grd. 8	X	X	X	X	X
62	.	Lockwasher, Spring, 1/4	X	X	X	X	X
63	04043-01	Washer, 17/64 x 7/8 x 1/8 H.T.	X	X	X	X	X
64	48021	Neutral Safety Switch	X	X	X	X	X
65	48122-01	Fiber Washer, .010	X	X	X	X	X
65A	48122-02	Fiber Washer, .020	X	X	X	X	X
66	48118	Ball Joint	X	X	X	X	X
67	04021-06	Hex Lock Nut, 3/8-24	X	X	X	X	X
68	43029	Shift Connector Rod	X	X	X	X	X
69	45119	Belt Guide Wld.			X	X	X
69	45067	Belt Guide Wld.	X	X			
70	.	Hex Head Bolt, 5/16-18 x 3	X	X	X	X	X
71	45034	Transaxle Support Wld.			X	X	X
71	45064	Transaxle Support Wld.	X	X			
72	48052	Spring, Brake Return	X	X	X	X	X
73	04062-02	Hair Pin, Small	X	X	X	X	X
74	43031	Blade Clutch Rod			X	X	X
74	43067	Blade Clutch Rod	X	X			
75	43043	Sleeve	X	X	X	X	X
76	.	Cotter Pin, 3/32 x 1	X	X	X	X	X
77	.	Washer, 33/64 x 1 x 16 Ga.			X	X	X
78	04062-01	Hair Pin, Large	X	X	X	X	X
79	.	Cotter Pin, 3/32 x 3/4	X	X	X	X	X
80	45015	Pivot Base Wld.	X	X	X	X	X
81	48051	Spring, Belt Clutch	X	X	X	X	X
82	42060	Bracket, Spring Mounting	X	X	X	X	X
83	48066	Pulley, Brake Cable	X	X	X	X	X
84	43024	Spacer, Pulley	X	X	X	X	X
85	.	Hex Head Bolt, 3/8-16 x 3	X	X	X	X	X
86	.	Washer, 13/32 x 1-1/2 x 7 Ga.	X	X	X	X	X
87	.	Hex Nut, 3/8-16	X	X	X	X	X
88	04022-04	Wing Nut, 3/8-16, Elastic Stop	X	X	X	X	X
89	42052	Battery Mounting Support			X	X	X
89	42187	Battery Mounting Bracket	X	X			
90	.	Hex Head Bolt, 1/4-20 x 3/4	X	X	X	X	X
91	.	Hex Nut, 1/4-20	X	X	X	X	X
92	42188	Battery Shelf	X	X	X	X	X
93	42024	Battery Cover	X	X	X	X	X
94	48099	Battery Cover Pad	X	X	X	X	X
95	04022-01	Wing Nut, 1/4-20, Elastic Stop	X	X	X	X	X
96	04003-01	Carriage Bolt, 1/4-20 x 6	X	X	X	X	X
97	42055	Battery Clamp	X	X	X	X	X
98	48015	Battery	X	X	X	X	X
99	.	Hex Head Bolt, 1/4-20 x 1/2	X	X	X	X	X
100	42042	Tank Bracket, Front			X	X	X
100	42185	Tank Bracket, Front	X	X			
101	42044	Tank Bracket, Rear			X	X	X
101	42186	Tank Bracket, Rear	X	X			
102	48054	Fuel Tank	X	X	X	X	X

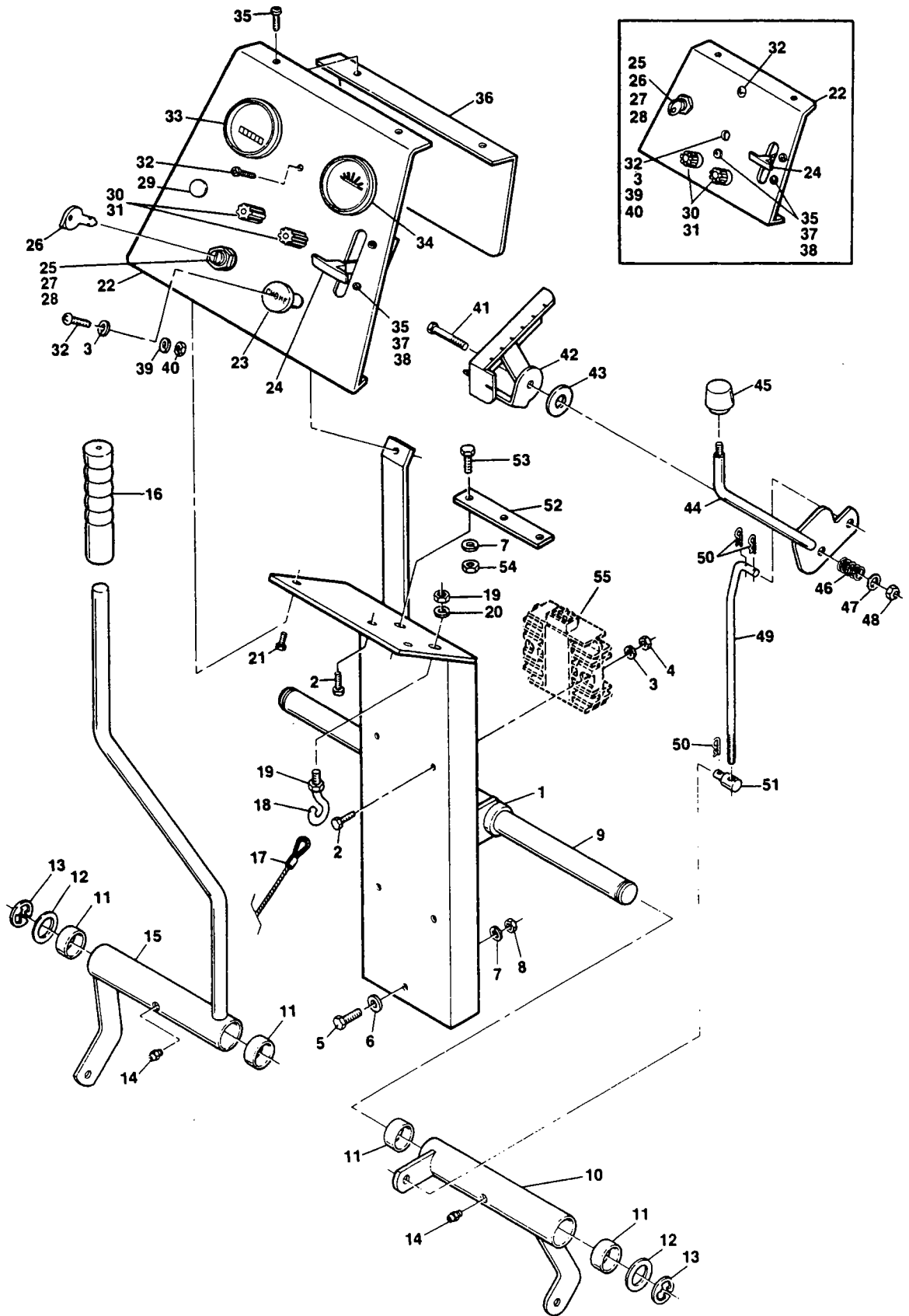
* Common hardware which should be purchased locally. All bolts Grade 5 plated, all other fasteners zinc plate.

ENGINE DECK (Continued)

Ref. No.	Part No.	Description	ST 12B	ST 13K	ST 17KA	ST 18B	ST 18KH
103	48055	Fuel Tank Cap	X	X	X	X	X
104	48056	Fuel Shut-off Valve	X	X	X	X	X
105	42048	Fuel Tank Strap	X	X	X	X	X
106	.	Rd. Head Mach. Screw, 1/4-20 x 1-1/2	X	X	X	X	X
107	48016	Solenoid	X			X	X
108	48179-01	Fuel Hose, Short		X	X		
109	48059-02	Fuel Hose Clamp		X	X		
110	48057-01	Fuel Filter	X	X	X	X	X
111	48059-01	Fuel Hose Clamp	X	X	X	X	X
112	48058-02	Fuel Hose				X	
112	48058-03	Fuel Hose			X		
112	48058-05	Fuel Hose	X	X			
112	48058-07	Fuel Hose					X
113	48002	Engine, 18 HP B&S				X	
113	48152	Engine, 12-1/2 HP Kawasaki		X			
113	48245	Engine, 17 HP Kawasaki			X		
113	48258	Engine, 18 HP Kohler					X
113	48270	Engine, 12 HP B&S	X				
114	48115	Oil Drain Extension				X	X
115	48116	Oil Drain Coupler				X	
116	48117	Oil Drain Plug	X			X	
117	.	Pipe Cap, 3/8 NPT			X		X
118	48255	Pipe Nipple w/Special Thrds.			X		
119	.	Pipe Elbow, 3/8 NPT			X		
120	.	4" Pipe Nipple, 3/8 NPT			X		
121	42068	Heat Shield - LH				X	
122	42067	Heat Shield - RH				X	
123	42328	Heat Baffle					X
124	.	Hex Head Bolt, 1/4-20 x 1/2				X	
125	39330	Debris Screen, 18 HP B&S				X	
126	490145	Muffler Wld., 18 HP B&S				X	
127	45013	Belt Guide Wld.				X	X
127	45062	Belt Guide Wld.	X	X	X		
128	.	Hex Head Bolt, Metric 8-1.25 x 30			X		
128	.	Hex Head Bolt, Metric 8-1.25 x 25		X			
129	.	Hex Head Bolt, 5/16-18 x 1-1/2	X			X	
130	.	Hex Head Bolt, 5/16-18 x 1-3/4				X	X
131	.	Hex Head Bolt, 5/16-18 x 2					X
132	42125	Muffler Guard				X	
133	48019	Safety Switch, Blade Clutch	X	X	X	X	X

* Common hardware which should be purchased locally. All bolts Grade 5 plated, all other fasteners zinc plate.

INSTRUMENT PANEL

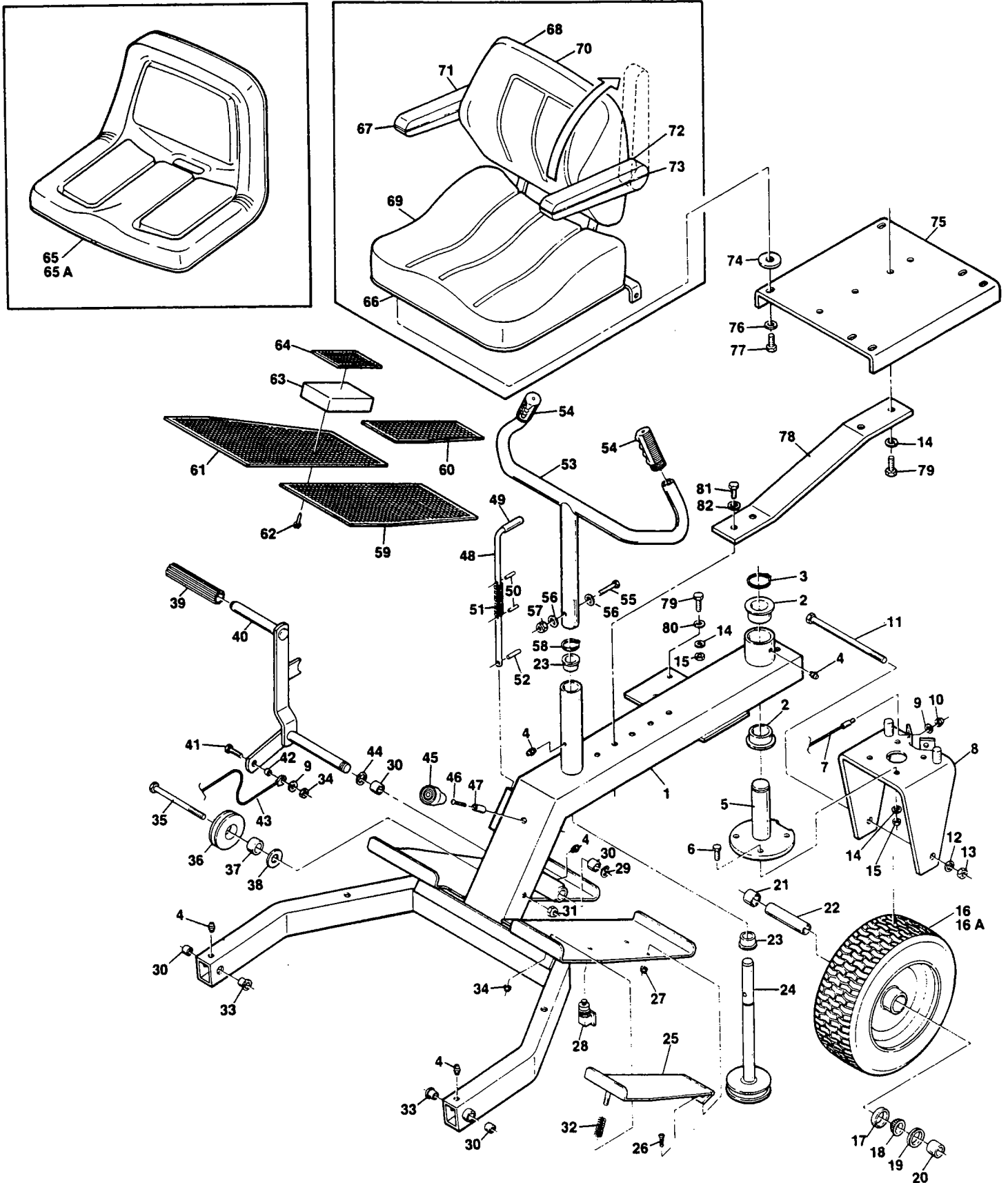


INSTRUMENT PANEL

Ref. No.	Part No.	Description	ST 12B	ST 13K	ST 17KA	ST 18B	ST 18KH
1	45025	Console Support Wld.	X	X	X	X	X
2	.	Hex Head Bolt, 1/4-20 x 1-1/4			X		
3	.	Washer, 9/32 x 5/8 x 16 Ga.	X	X	X		
4	.	Hex Lock Nut, 1/4-20			X		
5	.	Hex Head Bolt, 5/16-18 x 1-3/4	X	X	X	X	X
6	.	Washer, 11/32 x 11/16 x 16 Ga.	X	X	X	X	X
7	.	Lockwasher, 5/16 Spring	X	X	X	X	X
8	.	Hex Lock Nut, 5/16-18	X	X	X	X	X
9	43017	Bell Crank Shaft	X	X	X	X	X
10	46142	Shifter Wld. (Incl. 11 & 14)	X	X	X	X	X
11	48100-05	Bronze Bearing	X	X	X	X	X
12	04041-08	Washer, 49/64 x 1-1/4 x 16 Ga.	X	X	X	X	X
13	04050-02	Retaining Ring, 3/4 Ext. "E"	X	X	X	X	X
14	48114-01	Grease Fitting, 1/4-28 Str.	X	X	X	X	X
15	46143	Mower Engage Wld. (Incl. 11, 14, 16)	X	X	X	X	X
16	48093	Grip, Mower Lever	X	X	X	X	X
17	48045	Winch Cable Assembly	X	X	X	X	X
18	04070-03	Eyebolt, 3/8-16 x 2	X	X	X	X	X
19	.	Hex Nut, 3/8-16	X	X	X	X	X
20	.	Lockwasher, 3/8 Spring	X	X	X	X	X
21	.	Hex Head Bolt, 1/4-20 x 3/4	X	X	X	X	X
22	42049	Instrument Panel			X	X	X
22	42190	Instrument Panel	X	X			
23	48091	Choke Control				X	X
24	48090	Throttle Control				X	X
24	48246	Throttle Control	X	X	X		
25	48017	Starter Switch (Incl. 26-28)	X	X	X	X	X
26	48017-02	Key, Ignition	X	X	X	X	X
27	48017-03	Lockwasher, Int. Tooth 5/8	X	X	X	X	X
28	48017-04	Hex Nut, 5/8-11	X	X	X	X	X
29	48035	Snap In Plug			X	X	X
30	48024	Fuse Holder	X	X	X	X	X
31	48025-01	Fuse, 20A	X	X	X	X	X
32	.	Truss Head Screw, 1/4-20 x 3/4	X	X	X	X	X
33	48023	Hour Meter			X	X	X
34	48022	Ammeter			X	X	X
35	.	Washer Head Screw, #10-32 x 1/2	X	X	X	X	X
36	42050	Panel Cover Wld.				X	
36	45120	Panel Cover Wld.			X		
36	45122	Panel Cover Wld.					X
36	42191	Panel Cover Wld.	X	X			
37	.	Lockwasher, Ext. Tooth #10	X	X	X	X	X
38	.	Hex Nut, #10-32	X	X	X	X	X
39	.	Lockwasher, 1/4 Spring	X	X	X		
40	.	Hex Nut, 1/4-20	X	X	X		
41	.	Hex Head Bolt, 3/8-16 x 1-3/4	X	X	X	X	X
42	45024	Shift Quadrant Wld.	X	X	X	X	X
43	04041-10	Washer, 3/8 x 2 x 16 Ga.	X	X	X	X	X
44	45023	Shifter Handle Wld.	X	X	X	X	X
45	48092	Shifter Knob	X	X	X	X	X
46	48050	Spring	X	X	X	X	X
47	.	Washer, 13/32 x 13/16 x 16 Ga.	X	X	X	X	X
48	.	Hex Lock Nut, 3/8-16	X	X	X	X	X
49	43030	Shifter Connector Rod	X	X	X	X	X
50	04062-01	Hair Pin Cotter. Large	X	X	X	X	X
51	43032	Swivel Joint	X	X	X	X	X
52	42205	Winch Cable Attachment	X	X			
53	.	Hex Head Bolt, 5/16-18 x 1	X	X			
54	.	Hex Nut, 5/16-18	X	X			
55	†	Regulator/Rectifier			X		

* Common hardware which should be purchased locally. All bolts Grade 5 plated, all other fasteners zinc plate.
† Available from Kawasaki Motors Corp., U.S.A.

RIDER FRAME ASSEMBLY



RIDER FRAME ASSEMBLY

Ref. No.	Part No.	Description	ST 12B	ST 13K	ST 17KA	ST 18B	ST 18KH
1	45004	Steering Frame Wld.			X	X	X
1	45065	Steering Frame Wld.	X	X			
2	48100-02	Bronze Bearing	X	X	X	X	X
3	04050-05	Retaining Ring, 1-1/8 Ext. Basic	X	X	X	X	X
4	48114-01	Grease Fitting, 1/4-28 Str.	X	X	X	X	X
5	45008	Rear Wheel Pivot Wld.	X	X	X	X	X
6	*	Hex Head Bolt, 3/8-16 x 1-3/8	X	X	X	X	X
7	48042	Steering Cable			X	X	X
7	48153	Steering Cable	X	X			
8	45035	Rear Wheel Yoke Wld.	X	X	X	X	X
9	*	Washer, 9/32 x 5/8 x 16 Ga.	X	X	X	X	X
10	04021-03	Hex Lock Nut, 1/4-28	X	X	X	X	X
11	04001-40	Hex Head Bolt, 5/8-11 x 9	X	X	X	X	X
12	*	Lockwasher, Spring, 5/8	X	X	X	X	X
13	*	Hex Nut, 5/8-11	X	X	X	X	X
14	*	Lockwasher, Spring, 3/8	X	X	X	X	X
15	*	Hex Nut, 3/8-16	X	X	X	X	X
16	48005-01	Caster Wheel Assembly (Incl. 16A-19)	X	X	X	X	X
16A	48005-03	Rim Only	X	X	X	X	X
17	48005-04	Bearing Cup	X	X	X	X	X
18	48005-05	Bearing Cone	X	X	X	X	X
19	48005-06	Grease Seal	X	X	X	X	X
20	43020-01	Spacer, Short	X	X	X	X	X
21	43020-02	Spacer, Long	X	X	X	X	X
22	43021	Rear Wheel Sleeve	X	X	X	X	X
23	48100-01	Bronze Bearing	X	X	X	X	X
24	45009	Steering Shaft Wld.	X	X	X	X	X
25	45033	Safety Pedal Wld.	X	X	X	X	X
26	*	Flat Head Screw, #10-32 x 3/4	X	X	X	X	X
27	*	Hex Nut, #10-32, Elastic Stop	X	X	X	X	X
28	48026	Foot Safety Switch (Incl. Boot and Fasteners)	X	X	X	X	X
29	04050-02	Retaining Ring, 3/4 Ext. "E"	X	X	X	X	X
30	48100-06	Bronze Bearing	X	X	X	X	X
31	*	Hex Nut, 1/2-13, Elastic Stop	X	X	X	X	X
32	48049	Spring	X	X	X	X	X
33	48100-03	Bronze Bearing	X	X	X	X	X
34	*	Hex Lock Nut, 1/4-20	X	X	X	X	X
35	04001-37	Hex Head Bolt, 1/2-13 x 5-1/2	X	X	X	X	X
36	46139	Winch Cable Pulley (Incl. 37)	X	X		X	
36	46140	Winch Cable Pulley (Incl. 37)			X		X
37	48100-04	Bronze Bearing	X	X	X	X	X
38	*	Washer, 17/32 x 1-1/16 x 3/32	X	X	X	X	X
39	48096	Sleeve, Foot Pedal	X	X	X	X	X
40	45115	Foot Pedal Wld.			X		X
40	45019	Foot Pedal Wld.	X	X		X	
41	*	Hex Head Bolt, 1/4-20 x 1	X	X	X	X	X
42	43049	Sleeve	X	X	X	X	X
43	48241	Foot Cable Assembly			X		X
43	48047	Foot Cable Assembly	X	X		X	
44	*	Washer, 49/64 x 1-1/4 x 16 Ga.	X	X	X	X	X
45	48097	Bumper Stop Cover	X	X	X	X	X
46	*	Flat Head Screw, 1/4-20 x 1-1/2	X	X	X	X	X
47	43046	Bumper Stop	X	X	X	X	X
48	46141	Parking Brake Lever (Incl. 49)	X	X	X	X	X
49	48095	Grip	X	X	X	X	X
50	*	Roll Pin, 5/32 x 3/4	X	X	X	X	X
51	48053	Spring	X	X	X	X	X
52	*	Drive Lok Pin, 3/16 x 1-1/4	X	X	X	X	X
53	46029	Steering Handle Wld. (Incl. 54)			X	X	X
53	46036	Steering Handle Wld. (Incl. 54)	X	X			
54	48094	Grip			X	X	X
54	48159	Grip	X	X			
55	*	Hex Head Bolt, 5/16-18 x 1-1/2	X	X	X	X	X

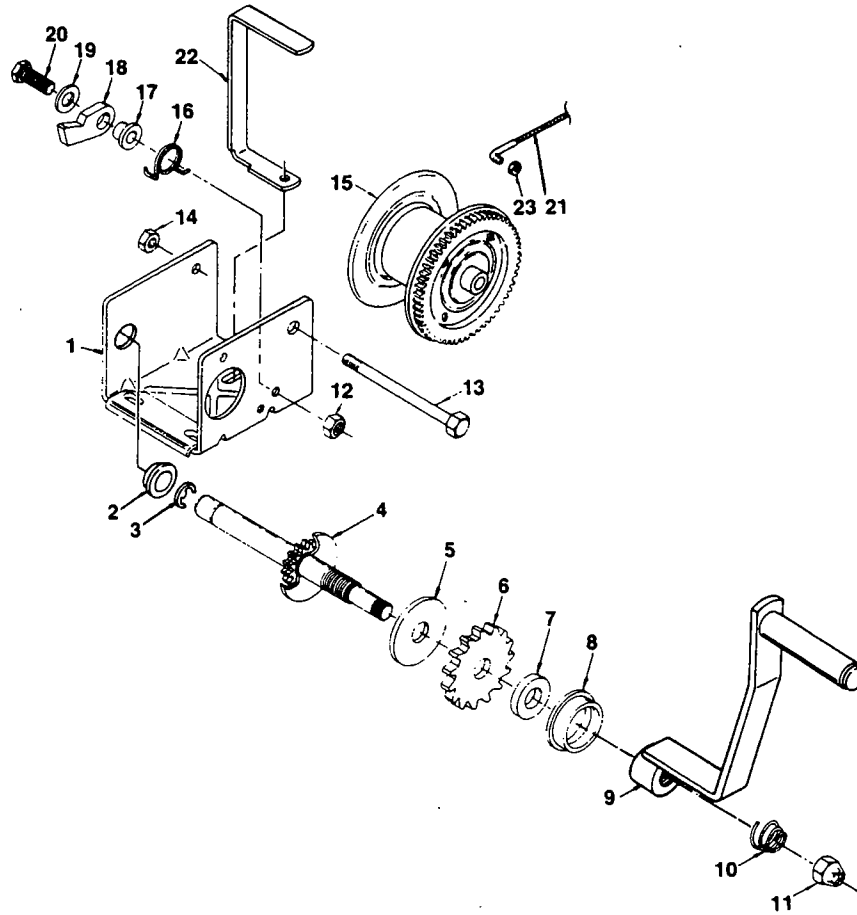
* Common hardware which should be purchased locally. All bolts Grade 5 plated, all other fasteners zinc plate.

RIDER FRAME ASSEMBLY (Continued)

Ref. No.	Part No.	Description	ST 12B	ST 13K	ST 17KA	ST 18B	ST 18KH
56	•	Washer, 11/32 x 11/16 x 16 Ga.	X	X	X	X	X
57	•	Hex Lock Nut, 5/16-18	X	X	X	X	X
58	04050-03	Retaining Ring, 7/8 Ext. Basic	X	X	X	X	X
59	48040	Pad - LH	X	X	X	X	X
60	48041	Pad, Safety Pedal	X	X	X	X	X
61	48039	Pad - RH	X	X	X	X	X
62	•	Hex Head Wood Screw #14 x 1			X	X	X
63	48036	Heel Rest			X	X	X
64	48037	Pad, Heel			X	X	X
65	48014	Seat Assembly	X	X			
65A	48014-02	Arm Rest Kit	X	X			
66	48013-01	Seat Assembly (Incl. 67-73)			X	X	X
67	48013-02	Arm Rest			X	X	X
68	48013-03	Backrest Cushion			X	X	X
69	48013-04	Seat Cushion			X	X	X
70	48013-05	Rear Cover			X	X	X
71	48013-07	Arm Mounting Bracket - RH			X	X	X
72	48013-08	Arm Mounting Bracket - LH			X	X	X
73	48013-10	Setscrew			X	X	X
74	04041-11	Washer, 13/32 x 1-1/2 x 7 Ga.	X	X			
75	45111	Seat Plate Wld.	X	X	X	X	X
76	•	Lockwasher, 5/16 Spring	X	X	X	X	X
77	•	Hex Head Bolt, 5/16-18 x 3/4	X	X	X	X	X
78	42026	Seat Support Spring	X	X	X	X	X
79	•	Hex Head Bolt, 3/8-16 x 1	X	X	X	X	X
80	•	Washer, 13/32 x 13/16 x 16 Ga.	X	X	X	X	X
81	•	Hex Head Bolt, 7/16-14 x 1-1/4	X	X	X	X	X
82	•	Lockwasher, 7/16 Spring	X	X	X	X	X

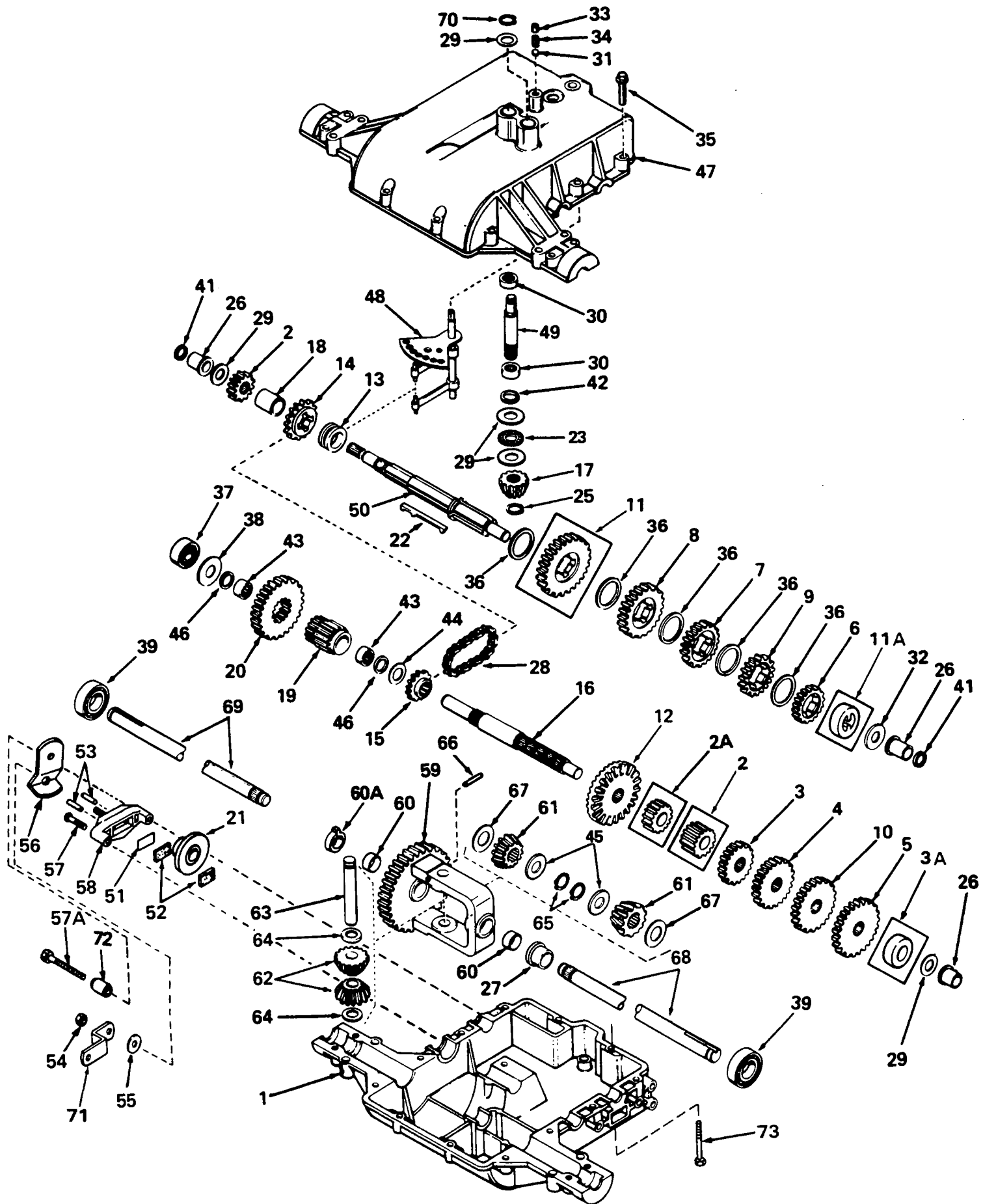
* Common hardware which should be purchased locally. All bolts Grade 5 plated, all other fasteners zinc plate.

WINCH LIFT SYSTEM



Ref. No.	Part No.	Description	ST 12B	ST 13K	ST 17KA	ST 18B	ST 18KH
1	48043	Winch Assembly (Incl. 1-8, 10-20)	X	X	X	X	X
2	204009	Shaft Bushing	X	X	X	X	X
3	205116	E-Ring	X	X	X	X	X
4	304228	Drive Shaft	X	X	X	X	X
5	204362	Pressure Plate	X	X	X	X	X
6	404164	Ratchet Wheel	X	X	X	X	X
7	404163	Pressure Washer	X	X	X	X	X
8	204359	Shaft Bushing	X	X	X	X	X
9	48044	Winch Handle	X	X	X	X	X
10	204364	Handle Spring	X	X	X	X	X
11	205015	Handle Nut	X	X	X	X	X
12	205011	Hex Locknut, 3/8-16	X	X	X	X	X
13	205008	Reel Shaft	X	X	X	X	X
14	205155	Lock Nut, 7/16-14	X	X	X	X	X
15	304227	Winch Reel	X	X	X	X	X
16	204363	Ratchet Spring	X	X	X	X	X
17	404166	Ratchet Spacer	X	X	X	X	X
18	404409	Ratchet Pawl	X	X	X	X	X
19	205024	Flat Washer	X	X	X	X	X
20	205167	Ratchet Bolt	X	X	X	X	X
21	48045	Winch Cable Assembly	X	X	X	X	X
22	42127	Cable Guide	X	X	X	X	X
23	04021-03	Hex Lock Nut, 1/4-28	X	X	X	X	X

TRANSAXLE ASSEMBLY



TRANSAXLE ASSEMBLY

Ref. No.	Part No.	Description	ST 12B	ST 13K	ST 17KA	ST 18B	ST 18KH
1	770071A	Case, Transaxle	X	X	X	X	X
2	778136	Gear, Spur (15 Teeth)	X	X	X	X	X
2A	778145	Gear, Spur (12 Teeth)			X	X	X
3	778199	Gear, Spur (15 Teeth)			X	X	X
3A	786071	Spacer	X	X			
4	778200	Gear, Spur (20 Teeth)	X	X	X	X	X
5	778202	Gear, Spur (28 Teeth)	X	X	X	X	X
6	778203	Gear, Spur (22 Teeth)	X	X	X	X	X
7	778205	Gear, Spur (30 Teeth)	X	X	X	X	X
8	778206	Gear, Spur (35 Teeth)	X	X	X	X	X
9	778204	Gear, Spur (25 Teeth)	X	X	X	X	X
10	778201	Gear, Spur (25 Teeth)			X	X	X
11	778207	Gear, Spur (37 Teeth)	X	X	X	X	X
11A	786072	Spacer	X	X			
12	778154	Gear, Bevel (42 Teeth)	X	X	X	X	X
13	784266	Collar, Shift	X	X	X	X	X
14	786083	Sprocket (18 Teeth)	X	X	X	X	X
15	786082	Sprocket (9 Teeth)	X	X	X	X	X
16	776204	Shaft, Counter	X	X	X	X	X
17	778176	Bevel Pinion, Input	X	X	X	X	X
18	786074	Spacer	X	X	X	X	X
19	778138	Pinion, Output	X	X	X	X	X
20	778139	Gear, Output	X	X	X	X	X
21	790003	Disk, Brake	X	X	X	X	X
22	792089A	Key	X	X	X	X	X
23	780071	Bearing, Thrust	X	X	X	X	X
25	788040	Ring, Retaining	X	X	X	X	X
26	780105A	Bushing, Flanged	X	X	X	X	X
27	780118A	Bushing, Flanged	X	X	X	X	X
28	786081	Chain, Roller (No. 41 Chain, 24 Links)	X	X	X	X	X
29	780072	Washer, Thrust	X	X	X	X	X
30	780122	Bearing, Needle	X	X	X	X	X
31	792077	Ball, Steel	X	X	X	X	X
32	780139	Washer, Thrust	X	X	X	X	X
33	792078	Screw, Set. 3/8-16 x 3/8	X	X	X	X	X
34	792079	Spring	X	X	X	X	X
35	792073	Screw, Hex Hd. Thread Forming, 1/4-20 x 1-1/4	X	X	X	X	X
36	780108	Washer, Thrust	X	X	X	X	X
37	780121	Bearing, Ball	X	X	X	X	X
38	780113	Washer, Flat	X	X	X	X	X
39	780119	Bearing, Ball	X	X	X	X	X
41	788051	Ring, Square Cut	X	X	X	X	X
42	788057	Ring, Square Cut	X	X	X	X	X
43	780112	Bearing, Needle	X	X	X	X	X
44	780114	Washer, Flat	X	X	X	X	X
45†	780114	Washer	X	X	X	X	X
46	788053	Ring, Square Cut	X	X	X	X	X
47	772084	Cover, Transaxle	X	X	X	X	X
48	784290	Rod & Fork Assembly, Shift	X	X	X	X	X
49	776135	Shaft, Input	X	X	X	X	X
50	776183A	Shaft, Brake	X	X	X	X	X
51	790007	Plate, Brake Pad	X	X	X	X	X
52	790006	Pad, Brake	X	X	X	X	X
53	786026	Pin, Dowel	X	X	X	X	X
54	792075	Locknut, 5/16-24	X	X	X	X	X
55	792076	Washer, Flat	X	X	X	X	X
56	790016	Lever, Brake	X	X	X	X	X
	48003	Transaxle Assy., Complete			X	X	X
	48160	Transaxle Assy., Complete	X	X			

† Required only with these axles that have machined down diameter in snap-ring area:

774558 - 25-1/4" Long

774506 - 13-1/4" Long

774621 - 22-5/8" Long

774620 - 12-7/8" Long

TRANSAXLE ASSEMBLY (Continued)

Ref. No.	Part No.	Description	ST 12B	ST 13K	ST 17KA	ST 18B	ST 18KH
57	792073	Screw, Hex Hd. Thread Forming, 1/4-20 x 1-1/4	X	X	X	X	X
57A	792085	Screw, Hex Hd. Thread Forming, 1/4-20 x 2-1/4	X	X	X	X	X
58	790025	Holder, Brake Pad	X	X	X	X	X
59	778175	Gear Assembly, Differential (Incl. 2 of No. 60)	X	X	X	X	X
60	780064	Bushing	X	X	X	X	X
60A	780120	Bushing	X	X	X	X	X
61	778166	Gear, Bevel	X	X	X	X	X
62	778131	Pinion, Bevel	X	X	X	X	X
63	786034	Pin, Drive	X	X	X	X	X
64	780065	Washer, Thrust	X	X	X	X	X
65†	792109	Ring, Retaining	X	X		X	
65	792018	Ring, Retaining	X	X	X		X
66	792040	Pin, Roll	X	X	X	X	X
67	780001	Washer, Thrust	X	X	X	X	X
68†	774558	Axle (25-1/4" Long)				X	
68	774666	Axle (25-1/4" Long)			X	X	X
68†	774621	Axle (22-5/8" Long)	X	X			
68	774668	Axle (22-5/8" Long)	X	X			
69†	774506	Axle (13-1/4" Long)				X	
69	774658	Axle (13-1/4" Long)			X	X	X
69†	774620	Axle (12-7/8" Long)	X	X			
69	774667	Axle (12-7/8" Long)	X	X			
70	792035	Ring, Retaining	X	X	X	X	X
71	786086	Bracket, Brake Lever	X	X	X	X	X
72	786092	Spacer	X	X	X	X	X
73	04007	Special Bolt	X	X		X	
	788067	Gear Grease, Bentonite	X	X	X	X	X

† Required only with these axles that have machined down diameter in snap-ring area:

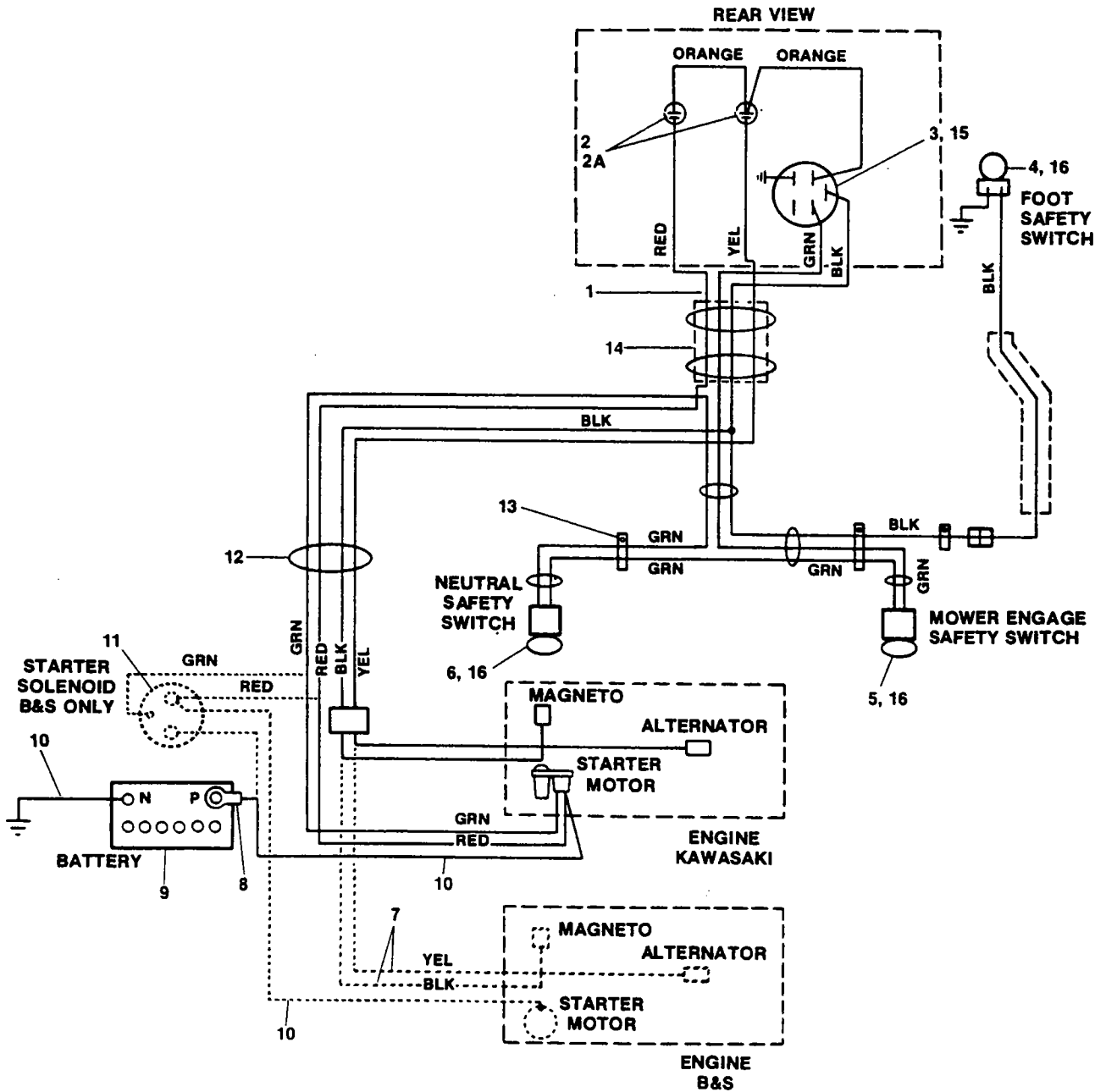
774558 - 25-1/4" Long

774506 - 13-1/4" Long

774621 - 22-5/8" Long

774620 - 12-7/8" Long

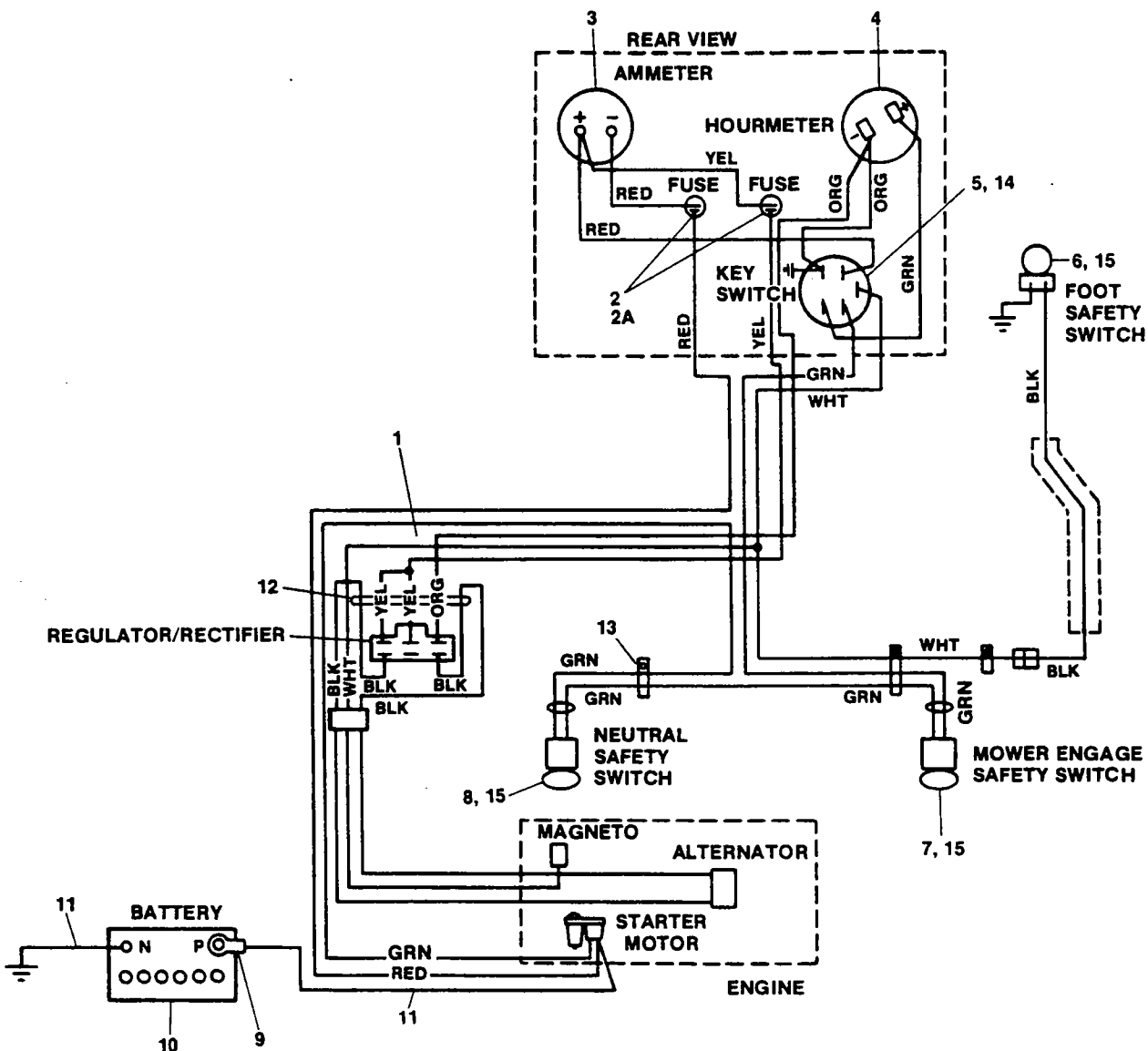
ELECTRICAL SYSTEM ST 12B & ST 13K



Ref. No.	Part No.	Description
1	48166	Wiring Harness, Complete
2	48024	Fuse Holder
2A	48025	Fuse
3	48017	Key Switch
4	48026	Foot Safety Switch
5	48019	Mower Engage Safety Switch
6	48021	Neutral Safety Switch
7	48174	Harness Adapter, B&S Only
8	48126	Rubber Boot

Ref. No.	Part No.	Description
9	48015	Battery
10	48029-01	Battery Cable
11	48016	Starter Solenoid, B&S Only
12	48028	Cable Tie
13	48030	Cable Clamp
14	48033	Plastic Conduit
15	48018	Connector, Starter Switch
16	48020	Connector, Safety Switch

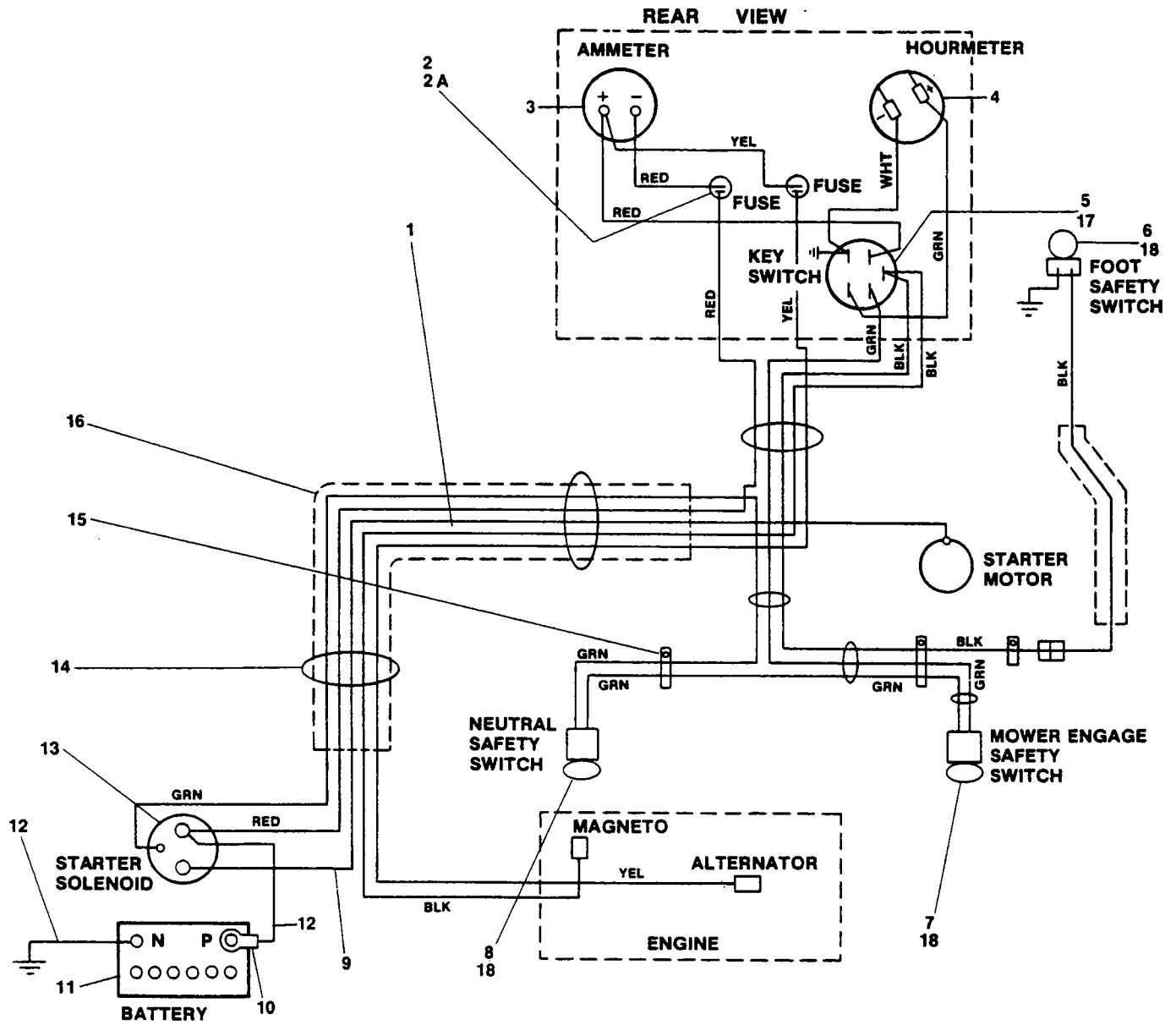
ELECTRICAL SYSTEM ST 17KA



Ref. No.	Part No.	Description
1	48252	Wiring Harness, Complete
2	48024	Fuse Holder
2A	48025	Fuse, 20A
3	48022	Ammeter
4	48023	Hour Meter
5	48017	Key Switch
6	48026	Foot Safety Switch
7	48019	Mower Engage Safety Switch

Ref. No.	Part No.	Description
8	48021	Neutral Safety Switch
9	48126	Rubber Boot
10	48015	Battery
11	48029-01	Battery Cable
12	48028	Cable Tie
13	48030	Cable Clamp
14	48018	Connector, Starter Switch
15	48020	Connector, Safety Switch

ELECTRICAL SYSTEM ST 18B & ST 18KH



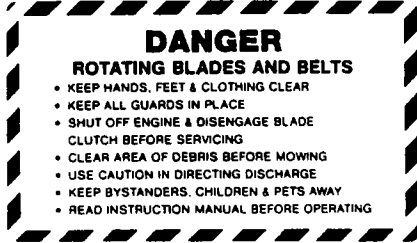
Ref. No.	Part No.	Description
1	48259	Wiring Harness, Kohler 18 HP E.S.
1	48031	Wiring Harness, B&S 18 HP E.S.
2	48024	Fuse Holder
2A	48025	Fuse, 20A
3	48022	Ammeter
4	48023	Hour Meter
5	48017	Key Switch
6	48026	Foot Safety Switch
7	48019	Mower Engage Safety Switch
8	48021	Neutral Safety Switch

Ref. No.	Part No.	Description
9	48029-02	Battery Cable
10	48126	Rubber Boot
11	48015	Battery
12	48029-01	Battery Cable
13	48016	Starter Solenoid
14	48028	Cable Tie
15	48030	Cable Clamp
16	48033	Plastic Conduit
17	48018	Connector, Starter Switch
18	48020	Connector, Safety Switch

REPLACEMENT DECALS



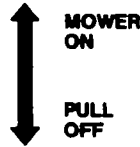
48077 Decal — Scag's Logo
Located on cutter deck - top surface.



48073 Decal — Danger-Rotating Blades
Located on cutter deck cover or deck top near discharge chute.



48071 Decal — O.P.E.I. Safety
Located on cutter deck near discharge chute.



48078 Decal — Engage Mower
Located on console panel - lower L.H. corner.



48079 Decal — Key Switch
Located on console panel - above key switch.



48048 Decal — Transport Down
Located on console support channel.

CAUTION

YOU MUST USE CLUTCH WHEN SHIFTING TO AVOID GEAR DAMAGE.

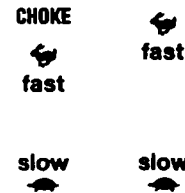
48147 Decal — Declutch
Located on console panel - R.H. side.



48072 Decal — Heavy Duty Commercial
Located on battery cover.

5-
4-
3-
2-
1-
N-
R-

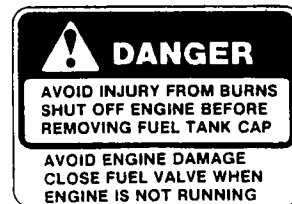
48074 Decal — Shifter Index
Located on shift quadrant weldment.



48186 Decal — Throttle - ST-12B, ST-13K, ST-17KA
48076 Decal — Throttle - ST-18B, ST-18KH
Located on console panel - near throttle control.

PATENT NO. 4,487,006

48182 Decal — Patent
Located on top of engine deck - rear L.H. corner.



48281 Decal — Gasoline

48008 Touch Up Paint, Scag's Gold, Aerosol Can

And finally:

PLEASE BE CAREFUL

1. Keep all shields in place, especially grass discharge guard.
2. Stop machine and remove spark plug wire to adjust or service.
3. When mechanism becomes clogged, stop engine before cleaning.
4. Keep hands, feet and clothing away from power-driven parts.
5. Keep off implement unless seat or platform is provided.
6. Keep others off.

REMEMBER — YOUR MOWER IS ONLY AS SAFE AS THE OPERATOR!

**FAILURE TO FOLLOW CAUTIOUS OPERATING PRACTICES MAY RESULT IN SERIOUS BODILY INJURY.
BESIDES, WE WOULD LIKE YOU TO CONTINUE TO ENJOY AND PROFIT BY USING OUR PRODUCTS.**

OWNER REFERENCE

TRACTOR MODEL _____

TRACTOR SERIAL NUMBER _____

MOWER MODEL _____

MOWER SERIAL NUMBER _____